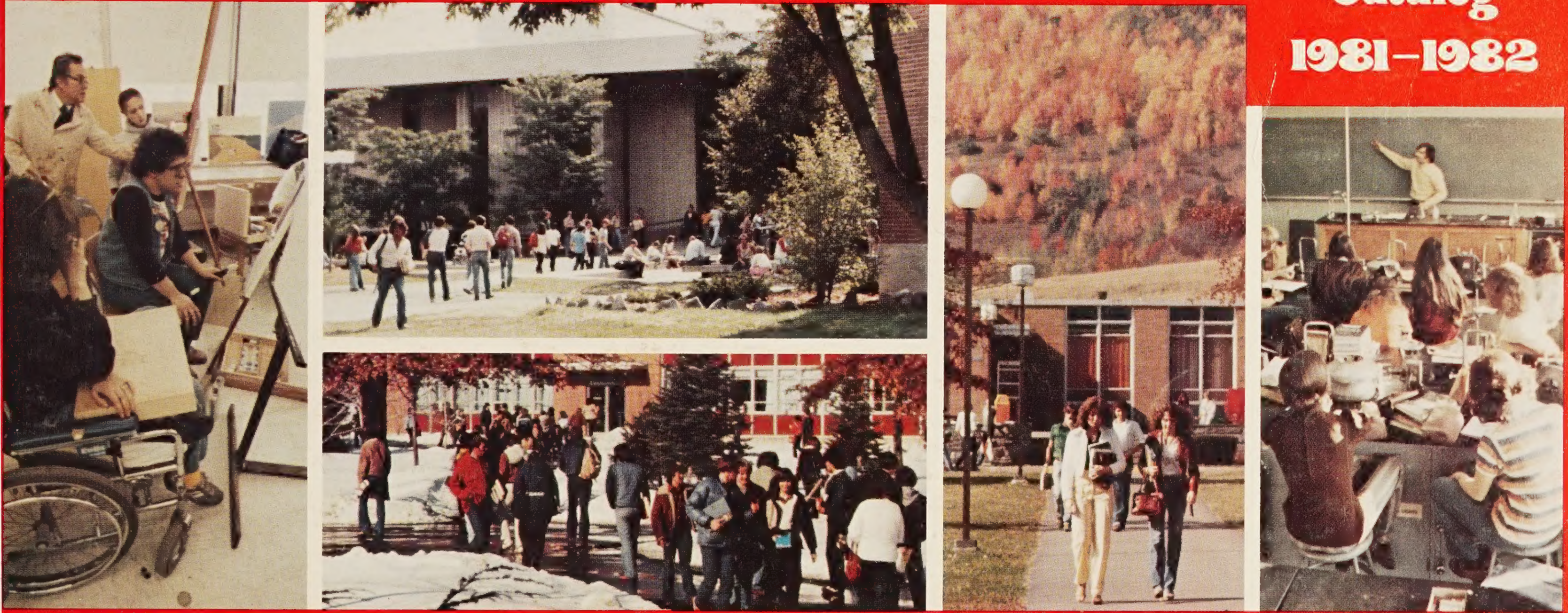
Broome Community College

Catalog 1981–1982



ARCHIVES CATALOGS

ACCREDITATION

Broome Community College is a member of the Middle States Association of Colleges and Secondary Schools.

The College is supervised by the State University of New York, and its curriculums are registered by the State Education Department.

The Civil, Chemical, Electrical and Mechanical Engineering Technology programs are ABET-accredited engineering technology curriculums. ABET is the Accreditation Board for Engineering and Technology, Inc., formerly the Engineers Council for Professional Development (ECPD).

The Dental Hygiene program is accredited by the Council on Dental Education of the American Dental Association, and the Nursing curriculum is accredited by the National League for Nursing.

The Council on Medical Education of the American Medical Association (AMA) has accredited three other curriculums—Radiologic Technology, Medical Record Technology and Medical Assistant, which is also accredited by the American Association of Medical Assistants. The Medical Record Technology program has double accreditation, too, having been approved by the American Medical Record Association as well as by the AMA.

NON-DISCRIMINATION COMMITMENT

Broome Community College, in compliance with Title VI of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, does not discriminate on the basis of race, sex, religion, national origin, age, handicap, color, or marital status in admissions, employment and treatment of students and employees.

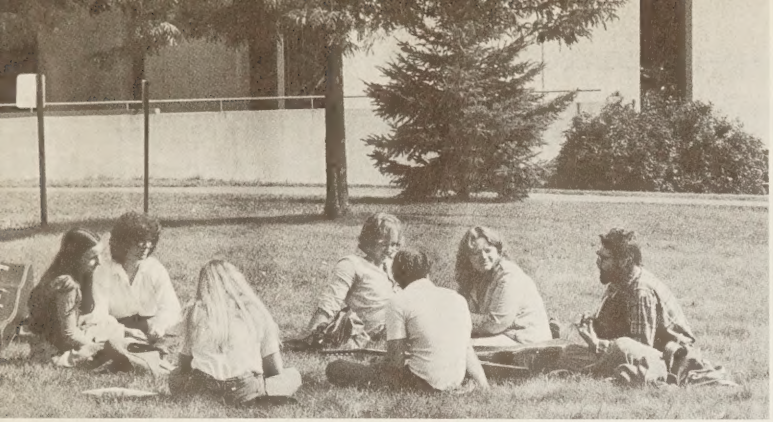
It is the policy and intent of the College, moreover, to comply with Section 504 of the Rehabilitation Act of 1973 as amended, which states:

"No otherwise qualified handicapped individual in the United States, as defined in section 7 (6), shall, solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

The College reserves the right at any time to make changes deemed advisable or necessary.

For information about the college, its programs, and its admissions procedure contact

Office of Admissions
Broome Community College
P.O. Box 1017
Binghamton, New York 13902



1981–1982 Catalog

Broome Community College

Binghamton, N.Y. 13902

A Comprehensive Community College
Supervised by the
State University of New York and
Sponsored by the County of Broome

COLLEGE CALENDAR FOR 1981-82

FALL SEMESTER 1981

Registration	August 24-28 (Mon-Fri)
Classes Begin	
Weekend Classes	Friday Night (August 28) Saturday (August 29) Sunday (August 30)
Day and Evening Classes	Monday (August 31)
*Last Day for 100% Tuition/ Fee Refund	September 4 (Friday)
Labor Day (No classes)	September 7 (Monday)
*Last Day for 50% Tuition/ Fee Refund	September 11 (Friday)
*Last Day for 25% Tuition/ Fee Refund	September 18 (Friday)
Fall Semester Break	October 12, 13 (Mon,Tues)
Thanksgiving Recess	November 25-29 (Wed-Sun)
Last Day of Classes	December 21 (Monday)
Examination Period	December 22-24 (Tues-Thurs)
Grades Due	December 28 (Monday)

SPRING SEMESTER 1982

Registration	January 11-15 (Mon-Fri)
Classes Begin	January 18 (Monday)
*Last Day for 100% Tuition/ Fee Refund	January 22 (Friday)
*Last Day for 50% Tuition/ Fee Refund	January 29 (Friday)
*Last Day for 25% Tuition/ Fee Refund	February 5 (Friday)
Spring Break	**March 8-12 (Mon-Fri)
Easter Break	†April 10-13 (Sat-Tues)
Last Day of Classes	May 11 (Tues)
Examination Period	May 12-14 (Wed-Fri)
Grades Due	May 17 (Monday)
Graduation	May 28 (Friday)

*Registrar's office must be notified by this date. In the Spring Semester, students in classes that meet only on Saturdays and Sundays will have until 12 noon on the subsequent Monday to notify the Registrar's Office of withdrawal and still qualify for the appropriate tuition/fee refund.

**Evening classes will meet on Friday, March 12
†No evening classis on Friday, April 9

52 COLLEGE PROGRAMS OF STUDY

DEGREE-GRANTING CURRICULUMS IN 30 FIELDS OF STUDY

Business
- 1-Accounting
- *2-Business Administration
- 3-Marketing Management and Sales
- Secretarial
  - 4-Executive
  - 5-Engineering (Industrial)
  - 6-Office Services Assistant

Computer Studies
- *7-Computer Science
- 8-Data Processing-Business
- 9-Data Processing-Technical

Engineering and Engineering Technology
- 10-Chemical Engineering Technology
- 11-Civil Engineering Technology
- 12-Electrical Engineering Technology
- *13-Engineering Science
- 14-Industrial Technology
- 15-Mechanical Engineering Technology

Health Sciences
- 16-Dental Hygiene
- 17-Medical Assistant
- 18-Medical Laboratory Technology
- 19-Medical Record Technology
- 20-Nursing
- 21-Radiologic Technology

*22-Liberal Arts and Sciences
- Associate in Arts Degree
- Associate in Science Degree

Special Programs
- 23-Child Care
- 24-Criminal Justice—Police
- 25-Fire Protection Technology
- 26-Individual Studies
- 27-Industrial Safety and Occupational Hygiene
- 28-Paralegal Assistant

Other Programs
- 29-Tool and Die Making
- 30-Automotive Service Specialist

DIPLOMA PROGRAMS IN 18 FIELDS OF STUDY

These programs generally consist of half the number of credits in an associate degree curriculum and are, therefore, the equivalent of one year of college study. Most are given in the evening.

Business with emphasis in:
- 1-Accounting
- 2-Computer Studies
- 3-Management
- 4-Marketing—Sales—Retailing

5-Child Care

6-Criminal Justice

7-Fire Protection Technology

Industrial Technology with emphasis in:
- 8-Applied Mathematics
- 9-Chemical
- 10-Civil
- 11-Computer Studies
- 12-Electrical
- 13-General Technical Studies
- 14-Industrial Safety and Occupational Hygiene
- 15-Mechanical
- 16-Production Management

17-Liberal Arts

18-Paralegal Assistant

CERTIFICATE PROGRAMS IN 4 FIELDS OF STUDY

These programs lead to certificates in areas for which entry-level employment does not require an associate degree, or they consist of a concentration of studies in a particular area which may be up to a year of college work:

1-Dietetic Assistant
2-General Office
3-Interior Design
4-Machinist Related Instruction

Unless otherwise indicated, degree programs are occupational in nature and designed to prepare graduates for immediate employment.

*These programs are designed to prepare graduates for transfer to four-year colleges and universities in the third, or junior, year.

HOW TO USE THIS CATALOG

To help readers find their way through the pages of this catalog, a few words of explanation may be helpful. The catalog is assembled in essentially five parts, as follows:

PART 1, which consists of pages 1 to 31, contains the policies, procedures and regulations of the College. And as the accompanying table of contents shows, these are divided into such areas as admissions, financial aid, expenses, academic affairs and student affairs.

PART 2, which runs from pages 31 to 56, is a rundown of the College's programs and curriculums, arranged in alphabetical order. It shows the courses taken by students in each semester, along with the number of class hours, laboratory hours and credits for each. A summary of the field for which each curriculum prepares its graduates is also included.

PART 3, from pages 57 to 69, is directed to part-time students. It has important academic information for them including a presentation of the programs of study for them for degrees, certificates and diplomas, as well as mini courses.

PART 4, covering pages 70 to 117, carries the descriptions of the college's courses. These are arranged in alphabetical order, according to subject matter, starting with Accounting and other business courses.

PART 5, which appears on pages 118 to 126, is essentially the listing of the administration and faculty of the college. There is also information about the State University of New York, of which the College is a part.

Attention is also directed to the **INDEX** on pages 127 and 128. This is an alphabetical listing of the topics covered in the catalog together with the page numbers where one can find them.

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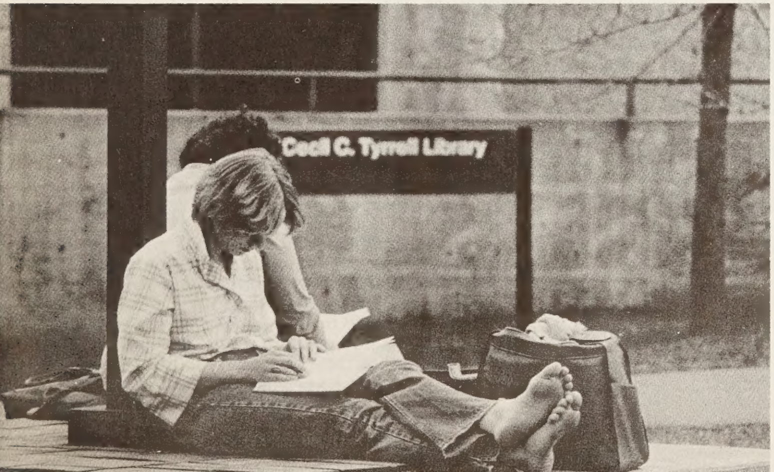

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LONG RANGE GOALS

Broome Community College is committed to a broad view of education defined simply as the preparation of people to live in today's complex world.

It is an accepted fact that benefits from our College programs flow to many persons, directly and indirectly. Benefits take many forms. Some are individual and accrue to the direct recipients of community college education. Among the advantages are a higher income, a more satisfying job, greater effectiveness as a consumer, greater ability in allocating time as well as money, direct enjoyment of the educational process and its related activities, and lifetime enhancement of cultural and other experiences.

Some benefits are social and accrue to non-recipients as well as direct recipients of community college programs. Among the gains are greater economic growth based on the general advancement of knowledge and elevation of skills and on the higher proportion of the population in the labor force and the enhanced mobility of members of the labor force.

Other gains include greater political effectiveness of a democratic society based on the more adequate knowledge and more active participation of citizens; greater social effectiveness of society through the resultant better understanding and mutual tolerance among individuals and groups; the more effective preservation and extension of our cultural heritage; the greater ability of individuals and groups to accept and adjust to rapid change; and the greater potential contribution of educated parents to the welfare of their children.

Broome Community College strives to create a stimulating environment and to shape the College to meet the needs of those it serves. Our College in a democratic way will assist in promoting educational experiences for the students that will lead to the fulfillment of their personal goals; developing within the students a sense of responsibility to themselves and to others; and serving the community by offering flexible curriculums and a variety of resources and activities to meet its needs.

OBJECTIVES

1. In providing equal opportunities in response to community needs and interests:
   a. Students will identify their academic and vocational strengths and/or interests.
   b. Students enrolled in career-oriented curriculums will demonstrate competencies required for para-professional, vocational or technical employment.
   c. Students enrolled in transfer curriculums will plan and execute their programs in order to achieve acceptance and success at a baccalaureate degree-granting institution.
   d. Students who are disadvantaged in the areas of reading, writing, mathematics and/or study skills may take developmental courses.
   e. Students interested in continuing education will avail themselves of courses for self-improvement, leisure enrichments and lifelong use.
2. The students will participate in a democratic society by supplementing their basic academic commitments and testing their ideas and ideals through active involvement in curricular, extracurricular and community affairs.
3. The community will utilize the College as a cultural, social and educational resource.
4. Members of the faculty and professional staff will assist students in pursuing academic, vocational and personal goals.

These objectives will be achieved through a regular schedule of day and evening classes, a counseling program and other College resources. Students and faculty will engage in a continuous evaluation of students' abilities, accomplishments and interests.

Admissions

ADMISSIONS PROCEDURES

Students are selected as they apply, complete the admissions process, and are found suitably qualified for a particular program. The following items are requested by the Admissions Office before a decision can be made on a student's application:

1. Application for admission.
2. A non-refundable $10 application fee. (If the applicant is reapplying, seeking admittance into the Early Admissions program, or is a qualified Educational Opportunity Program (EOP) applicant, then this fee does not have to be paid).
3. Official transcript(s) of all high school and any previous college work as of the date of application.

Here are a few items to note concerning the application process:

1. Students interested in any Health Science or Computer Studies program or considering full-time study must apply through the Admissions Office.
2. American College Testing (ACT) or Scholastic Aptitude Test (SAT) score reports are not required.
3. Recommendations from high school personnel are helpful, if available.
4. An interview with an Admissions Counselor at Broome Community College is desirable.
5. The postmark date of an application is an important part of the admissions criteria and helps the College implement its first-come, first-served policy.

TUITION DEPOSIT POLICY

Students admitted to the College prior to August 1 will be billed for a $50 tuition deposit. This payment will be applied toward the Fall Semester tuition bill for those students who register. Students who do not register for the Fall Semester can obtain a refund of the tuition deposit, through the end of the first week of classes, by submitting a request in writing to the College Controller. At the end of the first week of classes, the tuition deposit is non-refundable.

Applicants should recognize that it is their responsibility to complete the application forms and to see that any necessary transcripts and/or other required information are received and recognized by the Admissions Office counselors.

More information or answers to questions are available at the

Admissions Office
Broome Community College
P.O. Box 1017
Binghamton, NY 13902
Phone: (607) 772-5001

FULL OPPORTUNITY PROGRAM

To give every individual an opportunity to fullfill his/her own personal goals and potential, Broome Community College is a Full Opportunity Program College. This means that everyone who is a previous June graduate of a Broome County high school or a veteran from Broome County with a high school diploma is guaranteed admission into the College, but not necessarily to the program of his/her choice. To be admitted into any program of study, applicants must meet the academic requirements of that program. When an individual does not have the required academic background for a particular curriculum, he/she will be accepted into a program for which he/she is qualified. Some students may require more than two years to complete a program of study.

Admission to the College shall not be denied on the basis of age, disability, ethnic origin, nationality, political belief or affiliation, race, religion or sex.

SPECIAL ADMISSIONS PROGRAMS

Early Admissions is a program for high achieving students who are in high school and can benefit from taking college-level courses, full or part-time, before graduating from high school. While high school seniors are usually enrolled in this program, qualified juniors and sophomores may also be eligible.

Anyone interested in part-time Early Admissions should contact the Admissions Office or his/her high school counselor for the special application form. Full-time applicants should use the regular new student application.

Educational Opportunity Program. Because of its open admissions policy, Broome Community College has attracted a diverse group of students. Many of these students need extra help to earn a certificate, diploma or degree. The Educational Opportunity Program (EOP) is open to any student who shows academic potential but may not have had at least an 82 average in high school. An income eligibility requirement, defined by the program, must also be met. For more information contact the EOP Office in the College Library.

Non-High School Diploma applicants may qualify for a high school diploma by successfully completing 24 credit hours of course work at BCC or any college in a degree, diploma or certificate program. Students currently in high school or those having been out of high school less than one year typically cannot qualify for this program.

Transfer Credit for students who have taken or are taking college level course work is subject to the approval of the chairperson of the student's academic department at BCC. Grades earned will not be entered into the cumulative grade-point average at Broome Community College. Students must in all cases submit to the College Admissions Office official transcripts of all college level work taken and/or being taken at another college before formal acceptance will be granted.

Students transferring courses to BCC will be required to complete in credit hours the equivalent of a semester's course of study at BCC for graduation. The determination of this minimum will be the responsibility of the department faculty sponsoring the curriculum, but in no case will the requirement be less than 12 semester credits.

ACADEMIC PREPARATION FOR ADMISSIONS

Curriculum	REQUIRED High School subjects	RECOMMENDED High School subjects
Business Accounting Marketing Bus. Admin. Secretarial		2 units Mathematics incl. Intermediate Algebra 2 units Science College preparatory courses, Typewriting
*Chemical Engineering Technology	Chemistry 3 units Mathematics incl. Trigonometry	Additional Mathematics and Science courses Physics, Chemistry
*Civil Engineering Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
*†Computer Science	3½ units Mathematics incl. Advanced Algebra or Precalculus Math	Additional Mathematics, Science and Technical courses, Computer Programming
*†Data Processing	2 units Mathematics	Additional Mathematics (Intermediate Algebra urged) Computer Programming Typewriting
*†Data Processing—Technical	3 units Mathematics	Additional Mathematics Physics urged Computer Programming Typewriting
†Dental Hygiene	‡1 unit Mathematics Biology, Chemistry	Geometry Social Studies Typewriting
*Electrical Engineering Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses Physics
*Engineering Science	Chemistry, Physics 3½ units Mathematics incl. Advanced Algebra or Pre-calculus Math	Additional Mathematics Science and Technical courses, Computer Programming
Liberal Arts and Sciences		2 units Mathematics 4 units in any combination of science, language or additional mathematics College preparatory courses
*Mechanical Engineering Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
†Medical Assistant	1 unit Mathematics Biology, Chemistry	Additional Mathematics Science courses Typewriting
†Medical Laboratory Technology	2 units Mathematics Biology, Chemistry	Additional Mathematics Science courses
†Medical Record Technology	1 unit Mathematics Biology	Additional Mathematics Science courses, Chemistry, Typewriting
†Nursing	Algebra Biology, Chemistry	College preparatory courses
†Radiologic Technology	2 units Mathematics 1 unit Physics	Additional Mathematics Science courses, Typewriting 1 unit Biology

*Academic units of Mathematics are Regents courses, such as Elementary Algebra, Geometry, 11th year Math or Trigonometry. (For Engineering Science Students, 12th year Math).

*BCC has a developmental program that enables students lacking the proper academic preparation for this curriculum to take courses that will qualify them. They can take these courses at BCC or elsewhere during the summer preceding their enrollment or during the fall and spring semesters, in which case they would need three years to complete the curriculum.

†Academic units of Mathematics are Regents courses such as Elementary Algebra, Intermediate Algebra or Geometry.

†In these programs, Broome Community College gives priority for admissions to Broome County residents who will graduate from high school this academic year or are service veterans.

†Students interested in a degree in a Health Science or Computer Studies curriculum who enter the College in another program are cautioned that there is no guarantee that a petition to transfer will be approved. They should discuss the possibilities with the appropriate department chairperson.

‡Students without geometry must complete a short geometry module in the summer before they enter BCC.

NOTE: The REQUIRED SUBJECTS listed in the chart must be Regents subjects, except for Chemistry in Engineering Science and the science courses in the Health Sciences programs and physics in the Engineering Technologies. Regents or general level subjects are acceptable in those instances.

Grades of C (74) or above are necessary in all the preparatory required high school (college) subjects for Dental Hygiene, Nursing and Engineering Science applicants and in the physics requirement for Radiologic (X-ray) Technology. A grade of at least 80 is needed in Physics and Mathematics for Engineering Science applicants. A grade of at least C (74) is needed in Mathematics for Computer Science applicants. All other preparatory required high school (college) subjects must be completed with grades of D (65) or better.

HEALTH REQUIREMENTS FOR HEALTH SCIENCE PROGRAMS

A student's enrollment in one of the Health Science programs listed below is conditional upon passing a physical examination and obtaining appropriate immunizations when required. Students should contact the department chairpersons for specific information.

Medical Assistant
Nursing
Medical Laboratory Technology
Medical Record Technology
Radiologic Technology

Financial Aid

Considerable financial aid is available to students of Broome Community College, and the College maintains a Student Financial Aid office to help students. Information and applications for financial aid are sent to students who are seeking full-time enrollment when they apply for admission. Any part-time student planning to take 6 credit hours or more may qualify for financial aid by formally applying and being accepted into a degree, diploma or certificate program. Part-time students may receive information/applications by contacting the Student Financial Aid Office.

Financial aid at BCC falls into three broad categories—grants that do not have to be repaid, loans on which interest rates are usually low and that have to be repaid after graduation or leaving the College, and part-time employment called Work-Study. Assistance usually comes from a combination of these resources commonly referred to as a "financial aid package."

STUDENT AND FAMILY RESOURCES

A student's financial need is a term used to describe the funds required by a student to pay for his/her college education in excess of the amount that he/she and parents can afford to pay. Financial need is determined by using a standardized formula, which defines the "initial" or "demonstrated" need. The formula:

> Take the "total educational costs" and subtract the "parental contribution and student's summer earnings." This amount is the initial or demonstrated need.

The Financial Aid Office at the Broome Community College operates on the premise that all parents and students have a responsibility to contribute as much as they can toward the cost of the student's education. This contribution plays the primary role in determining the actual initial need.

To qualify for financial aid, a student must be enrolled in a degree program of the College and be taking 6 credit hours or more, in addition to having an initial or demonstrated need. This need can be met in a number of different ways—a combination of grants, loans and work-study funds in varying amounts of each. This combination is put together by the financial aid administrator and is called a "financial aid package."

ESTIMATING EXPENSES

Listed below are charts showing the estimated average costs for the 1981-82 college year for student expenses, depending on whether the student lives at home or not and is dependent on his/her parents or not. These cover a 9-month period which is the length of the college year—September to May.

Expense Charts

FOR DEPENDENT STUDENTS

	Single Commuter (living home)	Resident (living near campus)
Tuition	$ 800	$ 800
Fees	63	63
Books	200	200
Transportation	400	500
Home Maintenance	1,100	NA
Personal Expenses	500	500
Room	NA	1,350
Board	NA	1,100
Total	$3,063	$4,513
Non-NY State Resident: (Additional tuition)	800	800
Total	$3,863	$5,313

NOTE—A commuter is a student who lives with his/her parents and commutes to school; a resident is an out-of-town student residing locally.

FOR INDEPENDENT STUDENTS

	Single, Divorced, Widowed, Separated (no children)	Married, Head of Household one working or school (no children)	Married, Two working or school (no children)
Tuition	$ 800	$ 800	$ 800
Fees	63	63	63
Books	200	200	200
Rent	1,600	1,854	1,854
Food	1,100	1,436	1,650
Clothing	260	441	492
Transportation	600	600	740
Recreation & Personal	500	550	550
Total	$5,123	$5,944	$6,349
Non-NY State Resident: (Additional tuition)	800	800	800
Total	$5,923	$6,744	$7,149

NOTES—1) Medical, child care, debt repayment, and miscellaneous expenses may be allowed if the student is able to document the cost.
2) Child care allowance—up to $900 for each dependent child.
3) Transportation line includes insurance, license plates, maintenance. An additional allowance may be allowed depending on distance traveled from home to the College.

—ALL COSTS ARE SUBJECT TO CHANGE—

HOW TO APPLY FOR FINANCIAL AID

All students must apply for financial aid each academic year.

Federal and State Gifts

All financial aid applicants will be expected to apply for two major sources of financial aid—the Federal government's Basic Educational Opportunity Grant (BEOG) and the State's Tuition Assistance Program Award (TAP). Although the College provides information, applications and assistance, these funds are not generated by the College and must be applied for directly by the student to the agency. Further information regarding these and other problems is available at the Financial Aid Office (Wales Building, Room 101).

College Administered Financial Aid

To be considered for financial aid administered by the College, parents of dependent students and self-supporting students must submit the Financial Aid Form (FAF) to the College Scholarship Service and the College Application for Financial Aid to the Financial Aid office. By filing the forms outlined above, students will be considered for these financial aids, about which further information is available at the Financial Aid Office (Wales Building, Room 101).

Federal
National Direct Student Loan
College Work Study
Supplemental Educational Opportunity Grant
National Nursing Loan
National Nursing Scholarship

Institutional
BCC Foundation Grant

The college administers a number of programs which have been established by private individuals, companies, and organizations. These scholarship and grant programs have varying eligibility requirements. Students who wish to apply for these special scholarships may request an application from the Financial Aid Office.

Priority Funding Dates

Fall Semester . . . . . . April 15
Spring Semester . December 1

Incoming students should apply for financial aid when they apply for admissions. Because all college-based funds are limited, students are strongly encouraged to submit the appropriate forms far in advance of the above priority dates.

Completed applications received prior to April 15 will be given first priority. Applications received after this date will be considered as long as funds are available.

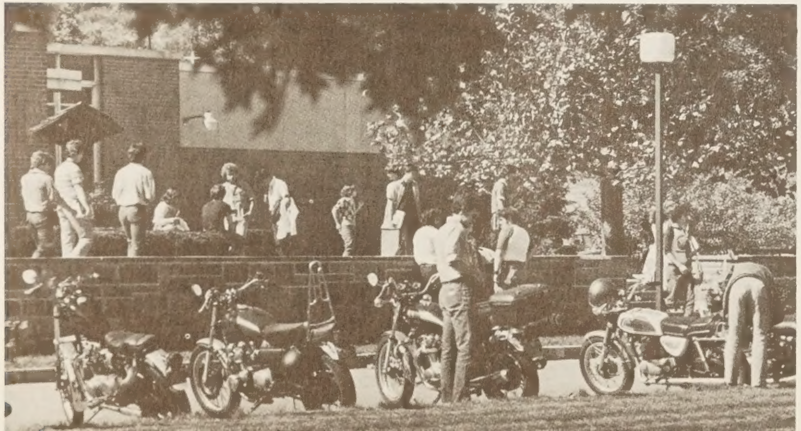
FAF should be mailed to College Scholarship Service before March 1 to be received at the College by April 15.

Notification of Decisions

Students are generally notified of the action taken on their application shortly after April 15. Students who apply late will be notified as folders are completed. A brochure explaining students' rights and responsibilities is sent to all financial aid recipients at the time the award is made. Interested students may receive a copy of this brochure before an award is made by contacting the Financial Aid Office.

If a student's request for aid is denied, the reasons for the decision are explained. Students may request an appeal on financial aid decisions by writing a letter to the Vice-president for Student Affairs.

ADDITIONAL FINANCIAL AID INFORMATION IS AVAILABLE IN THE COLLEGE FINANCIAL AID OFFICE (Wales Building, Room 101), such as brochures from the Office of Vocational Rehabilitation (OVR) and Social Security.



PACKAGING POLICY

At Broome Community College the self-help concept of financial aid packaging is used. Eligible students are funded, on a need basis and a first-come, first-served order.

The Basic Educational Opportunity Grant (BEOG) represents the floor of the package followed by any employment, loans and grants available. In cases where the family contribution is less than 50% of the total cost of the education, the student may be eligible for a Supplemental Educational Opportunity Grant (SEOG).

This grant is used mainly for the student who without "an SEOG award, would be financially unable to attend the institution of his/her own choice." This kind of financial aid packaging ensures that any student who wishes to attend a postsecondary institution will have the opportunity to obtain the needed funding.

An example of the self-help concept:

(1) Total Student Costs (Budget)

(2) Subtract Resources:
  a) Parental Contribution
  b) Student Summer Savings
  c) Students Assets
  d) Other Resources

Initial Financial Need

(3) Subtract:
  a) Tuition Assistance Program (TAP) Grant or Estimate
  b) Basic Educational Opportunity Grant (BEOG)

Unmet Need for Campus-Based Aid

(4) Subtract:
  a) Educational Opportunity Program (EOP)
  b) National Direct Student Loan (NDSL)
  c) College Work Study
  d) Supplemental Educational Opportunity Grant (SEOG)
  e) BCC—Grant in Aid
  f) National Nursing Loan
  g) National Nursing Scholarship

ZERO

RIGHTS AND RESPONSIBILITIES OF FINANCIAL AID RECIPIENTS

Student recipients of financial aid are the beneficiaries of money made available by a variety of agencies—federal, state, institutional, and/or private. The act of accepting a financial aid award signifies that the recipient knows about, understands, and is willing to comply with both the rights and the responsibilities involved with that award. Thus, it is the recipient's **RIGHT TO KNOW**:

1—What federal, state and institutional financial aid programs are available.

2—The deadlines for submitting application forms for each assistance program.

3—The cost of attending the College and the refund policy.

4—The criteria used by the College to select financial aid recipients and how the school determines financial need.

5—What resources (such as parental contribution) are considered in the calculation of financial need and how much of that need, as determined by the College, has been or will be met, and how (loan, grant and/or work-study).

6—How much of the financial aid will have to be repaid, and what portion is a grant (gift-aid). If the aid is a loan, the recipient should know what the interest rate is, the total amount that must be repaid, the payback procedures, the length of time allowed to repay the loan and when repayment is to begin.

7—How the College determines whether the student-recipient is making satisfactory progress and what happens if not.

It is the recipient's **RESPONSIBILITY** to:

1—Know and understand fully the financial aid program and one's specific financial aid package before signing the forms.

2—Make sure that all application forms are completed accurately and submitted, on time, to the right place.

3—Pay special attention to and accurately complete the application for student financial aid. Errors can result in long delays in the receipt of financial aid. Intentional misreporting of information on application forms for federal financial aid is a violation of law and is considered a criminal offense subject to penalties under the U.S. Criminal Code.

4—Return any and all additional documentation, verification, correction, and/or new information requested by either the Financial Aid Office or the agency to which the application is submitted.

5—Read and understand all forms that one signs and keep copies of them.

6—Accept responsibility for all agreements signed.

7—Notify the lender of changes in name, address or school status, if one has a loan.

8—Perform the work that is agreed upon in accepting a College Work-Study award.

9—Know and comply with the deadlines for application and/or reapplication for aid.

10—Know and comply with the school's refund procedures.

Satisfactory Academic Progress

If a financial aid recipient is not making satisfactory academic progress, he/she will no longer be elibible for financial assistance until satisfactory academic progress is being made. The definition of ''academic progress'' appears on page 21.

GRANTS

NOTE — The following financial aid information is current as of spring 1981. Due to the nature of financial aid programs, some of this information may be changed during the academic year. Please contact the Financial Aid office for updated information.

ELIGIBILITY	AMOUNT PER YEAR	WHERE/HOW TO APPLY
Tuition Assistance Program (TAP)		
Full-time students at any accredited college in New York State. Resident of New York State. No academic requirement.	$200 to full tuition charge, depending on income.	New York State Higher Educational Services Corp. Tower Building Empire State Plaza Albany, NY 12230 Forms available in BCC Financial Aid Office.
Regents College Scholarship **(Scholarships for nursing students and children of deceased or disabled veterans also available)**		
Based on SAT or ACT test scores. For full time students at any accredited college in New York State who are New York State residents.	Minimum of $250. Depending on income and class level, a TAP award may also be received that could combine with the $250 to equal the tuition charge.	New York State Higher Educational Services Corp. Tower Building Empire State Plaza Albany, NY 12230
Basic (Pell) Grant Program		
Accepted or enrolled full-time or half-time students who demonstrate financial need.	From $200 to $1900. Cannot exceed one-half the cost of college expenses.	Forms available in BCC Financial Aid Office and in high school guidance counselor offices after Jan. 1.
Supplemental Educational Opportunity Grant		
For full-time or half-time students with exceptional need.	Up to $1500 depending upon need and cost of college expenses; no more than one-half total assistance.	Student must submit a Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office and in high school guidance offices.
Nursing Scholarship		
For full-time or half-time nursing students with exceptional financial need.	Up to $2000 depending on need.	Student must submit Parent's Confidential Statement or Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
BCC Foundation Grant		
Full-time or part-time students with financial need.	Varies according to individual need.	Submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
Educational Opportunity Program		
Full-time and part-time students with financial need and less than an 82 high school average. Family income must be below a specific level.	Varies according to individual need. Average of $250 per student per academic year.	Application available in the Educational Opportunity Program Office at BCC in Library.

LOANS

ELIGIBILITY	AMOUNT PER YEAR	WHERE/HOW TO APPLY
New York State Higher Education Services Corporation Loan		
For full-time or half-time students with financial need. Student borrows on own signature from a participating bank.	Maximum of $2500 per academic year for dependent undergraduate students and $3,000 for independent undergraduates. No interest while in school. Repayment and 9% interest begin 6 months after leaving school. Up to 10 years to repay. A one percent loan fee is charged at the time the loan is received.	Most banks in New York State or New York State Higher Education Services Corporation, 50 Wolf Road, Albany, NY 12205. Forms available at local banks.
National Direct Student Loan		
For full-time or half-time students with financial need. Student borrows from the college on own signature.	Amount varies according to student's need. Total of $6,000 for an undergraduate program, but no more than $3,000 total for the first two years of college study. No interest while in school. Repayment at 4% interest begins 6 months after leaving school. Up to 10 years to repay.	Student must submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.
Nursing Student Loan		
For full-time or half-time nursing students with financial need. Student borrows from the college on own signature.	$2500 maximum per year not to exceed an aggregate of $10,000. No interest while in school. Repayment and 3% interest begin 9 months after leaving school. Up to 10 years to repay.	Student must submit Financial Aid Form and an Application for Financial Aid Forms available in BCC Financial Aid Office.
Parent Loan for Undergraduate Students (PLUS) Proposed		
Loan program for parents of dependent undergraduate students. Maximum $3,000 per year per student. Total loan limit of $15,000 per student. Repayment begins 60 days after disbursement. 9% interest rate. Has not yet been officially adopted.		
Pauline Parker Loan		
For full-time students who are Broome County residents, under 25 years of age, and in financial need.	$1000 maximum per year. No interest charge.	Forms available in BCC Financial Aid Office.
Emergency Loans		
For full-time or half-time students, through the support of the BCC Foundation. Available in emergency situations only.	$50 maximum. No interest charge. Repayment in 30 days.	Forms available in BCC Financial Aid Office.

EMPLOYMENT

ELIGIBILITY	AMOUNT PER YEAR	WHERE/HOW TO APPLY
College Work-Study		
For full-time or half-time students with financial need.	Students may work up to 20 hours a week when classes are in session or up to 40 hours a week during vacations. Wage: Minimum.	Student must submit Financial Aid Form and an Application for Financial Aid. Forms available in BCC Financial Aid Office.

Expenses

TUITION

Tuition and fees are payable at the Student Account Office prior to each semester's registration according to a payment schedule released by the College.

The responsibility for payment rests upon the student, who will be billed prior to the start of each semester. Students will not be allowed to register or will be dismissed if the established due dates for payment are not met.

STUDENTS CARRYING 12 OR MORE CREDIT HOURS
—considered full-time students.

For New York State residents	
With residency certificate . . .	$400 per semester
Without residency certificate	$800 per semester
For out-of-state residents	$800 per semester

Students admitted to the College prior to August 1 will be billed for a $50 tuition deposit. This payment will be applied toward the Fall Semester tuition bill for those students who register. Students who do not register for the Fall Semester can obtain a refund of the tuition deposit, through the end of the first week of classes, by submitting a request in writing to the College Controller. At the end of the first week of classes, the tuition deposit is non-refundable.

STUDENTS CARRYING LESS THAN 12 CREDIT HOURS
—considered part-time students.

For New York State residents	
With residency certificate . . .	$32 per credit hour
Without residency certificate	$64 per credit hour
For out-of-state residents	$64 per credit hour

Many students may qualify for financial aid, some of which is applicable toward tuition. **See Financial Aid section on pages 7 through 10.**

SEE TUITION REFUND POLICY ON PAGE 12.

RESIDENCY CERTIFICATE

To qualify for the resident tuition fee, a student is required by law to present once each academic year on or before registration a residency certificate indicating that he or she has been a legal resident of the State of New York for one year and of a county for six months.

Broome County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. This application must be completed and presented at the time of tuition payment.

Out-of-County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. The application must be completed, notarized and presented to the **County Treasurer of the County in which the student resides.** The County Treasurer will then issue a residency certificate to the student. This residency certificate must be presented at the time of tuition payment.

Part-Time Students must meet the same requirements as stated above. The application for residency certificate form is available at the Student Account Office and the Office of Continuing Education.

The completed residency forms are required once each academic year.

Failure to comply with this requirement will result in paying double tuition, not to exceed the limitations cited above.

FEES
Student Fees

STUDENT ACTIVITY

Full-Time Student	$25 per semester
Part-Time Day Student	2 per semester
Part-Time Evening Student	1 per semester

The activity fee entitles full-time day students to admission to varsity games, dances and parties, as well as a subscription to the student newspaper and the opportunity to participate in a varied program of co-curricular activities, including intramural athletics.

The Student Activity Fee is budgeted and administered by the Student Government and is not a college fee. It is apportioned as follows:

Campus publications Newspaper, Yearbook	15%
Program Board Speakers, Performers, Dances, Movies, Picnics, Special On and Off-Campus Programming	26%
Club Council 27 funded clubs including most curriculum organizations	14%
Athletics 11 male and female intercollegiate teams, coaches stipends, intramurals, administrative expenses	33%
United Student Government Administrative expenses, vehicle maintenance, class gift, audit, supplies	12%
	100%

Part-time day students (those taking fewer than 12 credit hours) pay a $2 student activity fee per semester. This entitles them to admission to convocations and to issues of the Fulcrum, the student newspaper. It does not include, however, admission to varsity sports events or membership in student organizations or to copies of The Citadel, the student yearbook. The student has the option though of paying $25 per semester and receiving the same privileges as full-time day students. **Part-time evening students** pay a $1 student activity fee per semester.

SEE FEE REFUND POLICY IN COLUMN 3 ON THIS PAGE.

ACCIDENT INSURANCE AND HEALTH FEE

Full-Time Student	$13 per year

Mandatory fee for all full-time day students for accident ($7 per year) and health ($3 per semester). Money collected from this fee is used to provide physicians services, drugs and medical supplies maintained in the Health Service for student use. The fee is non-refundable if a student withdraws from the college.

The accident policy covers the student for 12 months commencing August 31, 1981 for expenses incurred as a result of any accident, on or off campus. Maximum coverage is $1000 per accident. Claim forms are available in the Health Service during the academic year and from the Vice-President for Student Affairs in the summer.

Students who withdraw and wish a refund of their accident policy must apply directly to the Insurance Company. This information is available either in the Student Account office or in the Health Service.

Compulsory Health Service Fee For Part-Time Day Students	**$1 per semester**

MEDICAL INSURANCE

The College does not provide medical insurance, but it is available through a number of insurance companies including Blue Cross/Blue Shield.

GRADUATION/DIPLOMA FEES

Graduation	$13*
Diploma (part-time evening only)	8
Certificate (part-time evening only)	8

Paid during semester preceding graduation and is refundable if the student does not graduate or earn diploma or certificate.

*An increase in the Graduation Fee was being considered when this catalog was printed.

ALUMNI LIFETIME MEMBERSHIP $20

Membership in the Broome Community College Alumni Association is optional. The lifetime dues are payable during the semester preceding graduation, and they entitle graduates to complete Association benefits.

College Fees

Application	$10
Credit by Examination	See page 14
Late Registration-payment fee	10
Returned check fee	5
Transcript fee	1
Chemistry Laboratory	$5 per semester

For all students taking chemistry laboratory courses with 200 numbers.

Books, Supplies, Uniforms

Students provide at their own expense the necessary books and instructional materials. These may be purchased at the College Book Store maintained by the Faculty-Student Association for the convenience of the students. The cost varies, depending on the curriculum, from about $200 to $300.

In the Health Science curriculums students will provide, at their own expense, their own transportation to off-campus locations for necessary clinical and other experience.

In addition, some curriculums require uniforms. Among these are Nursing, Radiologic Technology, Medical Laboratory Technology and Medical Assistant. Gym clothes are necessary for physical education classes. Dental instruments and pants-type uniforms, which are prescribed for Dental Hygiene students, cost approximately $350 to $400.

Refund Policies, Procedures

TUITION REFUND POLICY

Students who withdraw from classes during the first three weeks of a semester will be entitled to tuition refunds on the following basis — 100% refund during the first week, 50% during the second week and 25% during the third week. After three weeks of classes there will be no refunds. See College Calendar on page 2 for additional information on dates for tuition refunds.

FEE REFUND POLICY

The student activity fee is refundable according to the same schedule as tuition. See "Tuition Refund Policy" above.

REFUND PROCEDURE

An application for refund of tuition and fees must be made in person and in writing in the Registrar's Office (W-206). The application must be on the College form provided. The date on which the application is filed is considered the official date of the student's withdrawal and any refund to which the student may be entitled is computed using that date.

Academic Affairs

REQUIREMENTS FOR GRADUATION

COMMON REQUIREMENTS FOR ALL FOUR DEGREES GRANTED BY THE COLLEGE

1. Successful completion of all courses for the degree as contained in this Catalog.
2. A 2.00 cumulative GRADE POINT AVERAGE in those courses applicable to the degree.
3. Recommendation of the faculty for the awarding of the degree.
4. Satisfaction of all obligations to the College.

THE ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

This degree is awarded to graduates of curriculums in these fields of study:

Accounting
Automotive Service Specialist
Chemical Engineering Technology
Child Care
Civil Engineering Technology
Criminal Justice—Police
Data Processing
Data Processing—Technical
Dental Hygiene
Electrical Engineering Technology
Engineering (Industrial) Secretarial
Executive Secretarial
Fire Protection Technology
Individual Studies
Industrial Safety and Occupational Hygiene
Industrial Technology
Marketing Management and Sales
Mechanical Engineering Technology
*Medical Laboratory Technology
Medical Assistant
*Medical Record Technology
Nursing
Office Services Assistant
Paralegal Assistant
*Radiologic Technology

5. Curriculum Requirements
    a. The minimum number of credits in a student's major field as determined by each academic department. These are courses intrinsic to and required by the various curriculums.
    b. A minimum of 20 credits in Liberal Arts and Sciences courses will include:
        1) Social Sciences: a minimum of 6 credits
        2) Natural and Physical Sciences (including mathematics): a minimum of 6 credits
        3) Humanities: a minimum of 6 credits in English (may include a maximum of 3 hours in speech)
    c. Satisfactory completion of all courses in a curriculum or as approved in a department.
    *d. Summer clinical experience required for graduation in curriculums noted.

THE ASSOCIATE IN SCIENCE DEGREE (AS)

This degree is awarded to graduates of the Business Administration, Computer Science, Engineering Science and Individual Studies curriculums and the Science Option in Liberal Arts and Sciences.

5. Curriculum requirements:
    a. At least 30 credits in the humanities, natural sciences, mathematics, the social sciences.
    b. Physical Education—2 credits (for Liberal Arts and Engineering Science students only).

THE ASSOCIATE IN ARTS DEGREE (AA)

This degree is awarded to graduates in the Liberal Arts and Sciences curriculum.

5. Liberal Arts and Sciences requirements distributed as follows:
    a. English: a minimum of 12 credits, of which 6 shall be in composition and 6 in literature.
    b. History: a minimum of 6 credits in approved courses.
    c. Humanities: a minimum of 6 credits (6 in philosophy or 6 in a foreign language).
    d. Mathematics: Students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics. . . Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics. . . Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.
    e. Natural and Physical Sciences: a minimum of 8 credits.
    f. Social Sciences: a minimum of 6 credits.
    g. Electives: 16 credits minimum. A maximum of 12 credits may be taken outside the offerings in Liberal Arts and Sciences with the approval of the dean of the division.
    h. Physical Education: 2 credits. Exceptions to this requirement may be made by the dean of Liberal Arts for valid reasons.
    i. Satisfactory completion of all courses in a curriculum or as approved in a department.

THE ASSOCIATE IN OCCUPATIONAL STUDIES DEGREE (AOS)

This degree is awarded to graduates of the Tool and Die Making curriculum and requires a minimum of 64 semester credit hours.

5. There are no specific requirements to take particular numbers of credit in general education courses for the AOS degree.

CREDIT BY EVALUATION

Non-Traditional Study

Broome Community College acknowledges that it is necessary and worthwhile to provide methods for considering various non-traditional activities for credit. By documenting and demonstrating that learning has taken place through various prior experiences, students may be awarded academic credit. Various examinations may also be taken for credit.

The Dean of Curriculum is the initial contact point for students interested in obtaining more information about non-traditional study, examination programs, and their suitability for various student purposes. Students will be assisted in determining whether or not such study or examinations would be worth pursuing for their educational objectives. The appropriate academic department is responsible for integrating any credit achieved in this manner into the student's academic program.

Advanced Placement Examination (AP)

The College will recognize for credit the AP examinations of the College Entrance Examination Board. A score of 3 or above is acceptable for credit upon departmental approval. Laboratory courses may require additional lab work for full credit for a college course. Credit awarded will be handled as transfer credit.

College Proficiency Exams (CP)

The CP exams of the University of the State of New York will be recognized for credit upon approval by the appropriate department. Credit awarded will be handled as transfer credit.

College Level Examination Program (CLEP)

The College will recognize successful achievement at or above the 50th percentile on CLEP exams in accordance with SUNY and American Council of Education guidelines. Approval of credit for degree requirements or electives is determined by the appropriate department. Credit approval will be handled as transfer credit.

BCC Credit By Examination (CBE)

The College in many instances provides for full or part-time BCC students credit by examination for knowledge gained outside the traditional classroom situation. This is strictly for use at BCC. Guidelines for this procedure are available from the College's department chairpersons. There will be a fee charged for the exam. If a student receives an F grade after normal completion of a course, no credit by examination may be given in that subject.

Special Individual Assessment

The College will evaluate for credit various types of learning acquired outside the usual classroom environment and a fee is required, based on credit hours requested. Particular criteria for awarding credit may be applied by an academic department. Approval of credit is the responsibility of the appropriate department. Students must identify what has been learned. Contact the Dean of Curriculum for additional information.

Special Assessment of Group Sponsored Learning

The College will evaluate for credit various types of learning acquired through participation in learning experiences or training provided by businesses, industry, unions, professional societies, governmental agencies or the military. Particular criteria for awarding credit may be applied by an academic department, and approval of credit is the responsibility of the department. Contact the Dean of Curriculum for additional information.

DEGREE PROGRAMS

Graduates of Broome Community College receive associate degrees, and the courses of study fall into six general categories—engineering and engineering technology, business, computer studies, liberal arts, health sciences and a cluster of others. Liberal arts courses are included in all curriculums, as it is believed that students need more than technical competence to understand people and their daily working and personal inter-relationships.

Applicants to the College should consider carefully the type of program they wish to pursue, for the nature of the offerings makes it difficult for a student to switch from one curriculum to another after commencing studies.

Engineering and Engineering Technology

In the area of technical education, the College offers seven programs. One, Engineering Science, is in effect the first two years of an engineering curriculum, and students who do satisfactory work in it should experience little difficulty in transferring to engineering colleges at the third-year level.

Four others are designed to train engineering technicians in the fields of Chemical Engineering Technology, Civil Engineering Technology, Electrical Engineering Technology and Mechanical Engineering Technology. Students in these programs are prepared for employment in various types of technical work immediately after graduation.

In addition, the College offers two programs for part-time students in the evening. These are Industrial Technology, which has six major areas of study to choose from, and Fire Protection Technology.

Business

The Business curriculums are designed primarily to prepare graduates for immediate employment in one of five fields—Accounting, Marketing Management and Sales, Engineering Secretarial, Executive Secretarial and Office Services Assistant. In addition, there is a sixth option, Business Administration, that combines more university parallel preparation with a minimum of job-oriented courses. This program is intended for the person who plans to continue his/her college education for a baccalaureate degree, even though he/she may want to work for a while before transferring to a four-year college.

It is possible to transfer from all programs. But because each student's transfer credits are evaluated by the four-year institution, the number of credits accepted can vary.

Computer Studies

The Computer Studies Department at Broome Community College offers four degree programs in the computer field—Computer Science, Data Processing, Data Processing Technical, Industrial Technology with Computer Emphasis. The latter is for evening part-time students. The Computer Science program leads to the Associate in Science degree while graduates of the other three receive the Associate in Applied Science degree.

Liberal Arts and Sciences

University parallel curriculums in Arts and Sciences prepare students for transfer to four-year colleges or universities. While the aim of liberal learning is to broaden human perspective and deepen understanding through study of philosophy, history, literature and the ares, students who identify career/professional goals early can begin to develop appropriate academic concentrations. Liberal Arts and Sciences also offers degree programs for those seeking immediate employment. Please refer to the Career Models on pages 46 and 47 in this catalog.

Health Sciences

Opportunities for men and women interested in the health sciences field are provided in six areas—Dental Hygiene, Medical Assistant, Medical Record Technology, Nursing, Medical Laboratory Technology and Radiologic Technology. Graduates are prepared to work immediately after graduation in physicians' or dentists' offices, laboratories or hospitals.

Graduates of these programs are also qualified to take whatever licensing examinations their professions require.

Others

The College offers degree opportunities in six other academic areas—Child Care, Criminal Justice, Individual Studies, Industrial Safety and Occupational Hygiene, Paralegal Assistant, and Automotive Service Specialist. All lead to the Associate in Applied Science degree, and Individual Studies students may earn either that degree or the Associate in Science, depending on their program of study. A Tool and Die Making curriculum leads to an Associate in Occupational Studies degree.

DIPLOMA AND CERTIFICATE PROGRAMS

Broome Community College also has diploma and certificate programs which are less than two years in length, have more specific objectives than the associate degree offerings, and consist of about one year of college credit. Some are designed to prepare students for jobs that require specialized higher education, but not necessarily a college degree; some provide students with an opportunity to upgrade their academic backgrounds or expand their qualifications for a particular field of study; and some offer college credits and additional training to people already working in the field.

Most of the diploma and certificate offerings carry college credits, and they can lead a person into some of Broome Community College's degree-granting curriculums. They can be taken on a full-time or part-time basis, and most of them are offered in the evening although some are available through day classes. No specific high school courses are required for enrollment.

For further details, a listing of courses and literature about most of these diploma and certificate programs, contact the BCC Office of Continuing Education (Wales Building, Room 108 or phone 772-5012).

Diploma Programs

- Business Emphases
  - Accounting
  - Computer Studies
  - Management
  - Marketing/Sales/Retailing
- Child Care
- Criminal Justice
- Fire Protection Technology
- Industrial Technology Emphases
  - Applied Mathematics
  - Chemical
  - Civil
  - Computer Studies
  - Electrical
  - General Technical Studies
  - Industrial Safety and Occupational Hygiene
  - Mechanical
  - Production Management
- Liberal Arts
- Paralegal Assistant

Certificate Programs

- Dietetic Assistant
- General Office
- Interior Design
- Machinist Related Instruction

COOPERATIVE PROGRAMS WITH OTHER COLLEGES

Broome Community College has direct transfer agreements with a number of four-year colleges to facilitate the acceptance of BCC graduates into the third year of study. The number of colleges with which BCC has such agreements is increasing each year. Further details are available in the Counseling and Student Development Center (Wales Building, Room 200).

With SUNY Binghamton

Transfer Agreement

All Broome Community College students who have graduated or who will graduate with an AA or AS degree with a grade point average of at least 3.0 will be admitted, upon application, as matriculated students in Harpur College of SUNY at Binghamton. Those students graduating with the above degrees but with a grade point average between 2.6 and 3.0 are usually admitted. Others, including those with an AAS degree, should contact the SUNY at Binghamton Office of Admissions. Admitted students will be granted junior-year standing upon presentation of 56 or more transferable credits.

Cross-Registration

BCC students may cross-register at Binghamton for one course each semester. The courses for which they cross-register must be courses that are not available at Broome Community College. No additional tuition is necessary. Additional information is available in the Dean of Academic Services Office in the Wales Building, Room 202.

Joint Degree

The joint-degree program enables students in SUNY at Binghamton's Bachelor of Arts degree program to simultaneously earn an Associate in Applied Science degree at BCC.

Additional information on these programs is available in the office of the Dean of Academic Services (Wales Building, Room 202).

With College of Environmental Science and Forestry (SUNY)

Pre-Environmental Science and Forestry

This program is designed for those students who ultimately desire a B.S. degree in the environmental sciences and/or forestry from the SUNY College of Environmental Science and Forestry (ESF), which is an upper division/graduate center.

After the first two years of study at Broome Community College, transfers to ESF may apply to a variety of programs at Syracuse which include the **biological sciences** (botany and forest pathology, entomology, zoology, wildlife biology, silvics, pest management); **chemistry** (natural and synthetic polymers, biochemistry and natural products, environmental); **forest engineering, paper science and engineering; wood products engineering; and forestry** (resource management, forest resource science, management science, environmental education and communications, urban forestry, world forestry, applied resource management). The program in **landscape architecture** leads to a B.S. degree in environmental studies and, after one additional year, a Bachelor of Landscape Architecture degree.

Persons planning to transfer should follow the program requirements in consultation with BCC's Pre-Environmental Science and Forestry campus advisor for selection of electives which vary according to the curriculum at ESF.

Successful graduates of Broome Community College's Pre-Environmental Science and Forestry Program generally gain admission to the SUNY College of Environmental Science and Forestry with full junior class status.

Contact campus advisor for specific course requirement: Roger McVannan, Room T-108, phone 772-5093.

With Keystone Junior College

BCC students may also cross-register at Keystone Junior College in LaPlume, PA. for one course each semester. The courses for which they cross-register must be ones that are not available at Broome Community College, and they can take them without paying additional tuition. Additional information is available in the office of the Dean of Academic Services (Wales Building, Room 202).

Guaranteed Transfer Program with State University of New York

Students who graduate from Broome Community College with Associate in Arts or Associate in Science degrees are guaranteed admission, at the third-year level, to a four-year college of the State University of New York. This guarantee has some limitations and details are available in the Counseling and Student Development Center (Wales Building, Room 200).

One-Plus-One Programs

Broome Community College has One-Plus-One Programs with other two-year colleges to enable a student to attend BCC for one year and then transfer to the other college for the second year for the Associate in Applied Science degree. This program permits students to begin studying at BCC for a degree in a field not offered at this College. By taking the BCC courses that one needs for the particular degree involved, residents of Broome County can enjoy the advantages of living at home during one year of their college attendance. Students taking these One-Plus-One Programs are liberal arts students at Broome Community College because most of the courses they take at BCC are liberal arts courses.

Listed below are colleges which offer transfer opportunities for students who have completed the appropriate one year of study at Broome Community College. Roger McVannan is the academic advisor for most of these programs, and he should be contacted for more information about them, except where another academic advisor's name is listed.

Delhi Agricultural and Technical College
- Hotel Restaurant Technology
- Construction Technology (Stephen Steele)
- Architectural Technology (Stephen Steele)
- General Agriculture
- Animal Husbandry-Dairy

Canton Agricultural and Technical College
- Agronomy/Horticulture
- Agricultural Engineering
- General Agriculture
- Animal Husbandry
- Dairy and Food Service
- Mortuary Science
- Science Laboratory Technology- Biology Option (David Walsh)

Paul Smith's College
- Hotel and Restaurant Program

Two-Plus-Two Programs

In addition to the one-plus-one programs, Broome Community College also has cooperative arrangements with four-year colleges. These cooperative arrangements allow students to take the first two years of a four-year degree at Broome Community College and then complete studies for the baccalaureate degree at the particular four-year college, usually in two additional years.

Colleges listed below have cooperative arrangements with Broome Community College in the areas of study indicated. Contact the Admissions Office at Broome and/or the appropriate department chairperson for specific information on course requirements. In addition, many of the four-year colleges require specific grade point averages to be eligible for transfer.

College of St. Rose
All AA, AS degrees

Cornell University (College of Human Ecology)
Nutritional Sciences

Hofstra University
Full transfer for all AA and AS in Liberal Arts, Business Administration and Engineering Science

LeMoyne College
Any baccalaureate degree program with AA or AS in Liberal Arts, Science, Business Administration, Engineering Science

Marist College
Parallel programs in Business (Marketing Management) Accounting, Engineering Technology (Civil, Electrical, Industrial and Mechanical

St. John Fisher College
AA, AS degree programs, Liberal Arts and Sciences,
Business Administration, Engineering Science

Rochester Institute of Technology
AA, AS, AAS degree

SUNY College at Cortland
Elementary Education, Computer Science

SUNY College at Fredonia
Any baccalaureate degree program in Liberal Arts and Sciences, Business Administration, Engineering Science, Radio and Television with recommended course sequences

SUNY College at Oneonta
AAS in Accounting, Marketing Management and Sales, Data Processing, and AS in Computer Science

SUNY College at Oswego
Business Administration

Syracuse University
School of Management

Trinity College
AA, AS or AAS degrees, concentrates on Liberal Arts, Sciences, Business Administration Engineering Science

SUNY Upstate Medical Center
Cytotechnology, Medical Technology, Phsyical Therapy

Utica College of Syracuse University
AA, AS graduates in following concentrations—Liberal Arts and Sciences, Business Administration Engineering Science

Waynesburg College
Associate degree graduates accepted, transfer credit determined on individual basis

INTERNATIONAL STUDIES PROGRAMS

Broome Community College is a founding member of the College Consortium for International Studies, a group of 30 colleges spreading geographically from Canada to Florida and from California to Maryland. This consortium, during the 1980-81 academic year, offered students about 65 overseas academic programs in 27 foreign locations.

The programs range from structured, formal courses at affiliated schools and institutions abroad, to service-learning and contract-independent study courses. Students may choose from short-term programs in January and during the summer to longer term, semester and year-long programs.

SEMESTER PROGRAMS

BCC provides formal, structured programs lasting for a semester, a year or two years, in England, Denmark, Egypt, Germany, Ghana, India, Ireland, Israel, Italy, Mexico, Spain and Switzerland. Students study a full semester program (usually 15 to 18 credits) that is arranged prior to their departure at affiliated schools, institutions, colleges or universities abroad.

The subject areas range from liberal arts courses to specialized programs, such as criminal justice, languages and human services. Costs of these programs vary greatly, with the emphasis on high quality programs at public institutions. The costs approximate those at U.S. public colleges. For the 1981-82 year, the cost of a full semester in the popular program in England will be about $2200. This includes full room and board, all tuition costs, round trip air transportation, and many extras.

Many BCC students will find their academic and personal lives enriched through a cultural experience difficult to match in a conventional two-year course of study in this country. BCC maintains close communication with consortium offices in New York, London and Jerusalem to facilitate the placement of students in qualified institutions abroad.

JANUARY AND SUMMER SHORT PROGRAMS

During each academic year BCC conducts a wide variety of short-term programs in January and in the summer months. Students at BCC who have been introduced to study abroad through these short-term programs, usually two to three weeks in length, often then decide to study overseas for a semester or year.

The short-term courses have grown in scope, as well as in number. During the January 1981 intersession, courses offered in London were Theater, Real Estate, Criminal Justice Seminar, Nursing Seminar, Social Welfare Seminar, Psychology Seminar. Students were also able to study Italian Culture and Art in Italy and the Life and Culture of India. Costs for these programs last year started at $798 for the London courses. A full list of the January offerings is usually available by November.

The summer programs vary in length from two weeks to two months. The 1981 offerings included Music and Art in Vienna, Antiquities of Ireland, Italian Culture and Language, History and Culture of Spain and North Africa, Discover China, and Anthropology Field School in Mexico. Costs in the summer programs are somewhat higher than those in January due to higher airline costs.

A special month long program at the University of Madrid is available for local Spanish students. The cost of this program for 1981 was $1600, but most students were able to qualify for scholarships under a special grant from the Spanish government. A full list of courses being offered during the summer is usually available in March.

ADMISSION TO PROGRAMS

Admission to the College does not automatically insure admission to BCC's programs overseas; separate application must be made to the consortium. Students will be evaluated on their academic ability, motivation, maturity and potential adaptability to a foreign culture. In addition to BCC approval, interviews with personnel from affiliate consortium institutions may be required. All programs are available to students from any college or the general public. At least one-half of the participants last year were community residents who went on short-term programs on a non-credit basis.

CREDITS, TRANSCRIPTS AND TUITION

Students register at BCC and pay the appropriate tuition, which in many cases covers the instructional costs abroad. Students are monitored through consortium offices in London and Jerusalem, or through individual mentors. Upon the successful completion of the formal program or after fulfillment of the contract, students will receive a BCC transcript reflecting the grades achieved or the course equivalents or the work done through the contract, greatly facilitating transfer of credits to other American institutions.

Students may earn up to 18 credits per semester, leading to an associate degree. Credits for intersession/short-term programs range from one to six, depending on the time spent abroad and the instruction offered in the program.

For additional details about any of the above programs, students should contact the International Studies Program Office at Broome Community College (Titchener Hall, Room 121—Phone (607) 772-5094).

SPECIAL CAREER PROGRAMS

The following curriculums at the College are conducted under the Department of Special Career Programs:

Child Care (AAS degree)
Criminal Justice (AAS degree)
Dietetic Assistant (Certificate Program)
Fire Protection Technology (AAS degree)
Individual Studies (AAS or AS degree)
Industrial Safety and Occupational Hygiene (AAS degree, Diploma Program)
Paralegal Assistant (AAS degree, Diploma Program)

MINI COURSES

Broome Community College offers a wide variety of non-credit, short courses, mostly in the evening. See page 69.

LEARNING SKILLS CENTER

Department Chairman, Steve Natale
Library, Room 27 on 2nd floor
Telephone 772-5038

Students entering college may not have the appropriate preparation for the Associate Degree they seek — for example, when a person changes careers, returns to school after several years, or needs to upgrade particular academic skills.

BCC's Learning Skills Center is committed to helping students realize their goals, regardless of prior academic preparation. The Center has courses and activities available for students and works closely with the Admissions and Financial Aid Offices, The Counseling and Student Development Center and Educational Opportunity Program personnel to provide a supportive environment for learning.

DIAGNOSTIC TESTING — The Learning Skills Center administers three tests to every entering full-time student in reading, in writing and mathematics. Part-time students are also encouraged to take these tests.

COURSE PLACEMENT — The Learning Skills Center uses the information gained from these tests to recommend to each student courses which are most appropriate to his/her program of study. Every effort is made to place students in courses in which they can succeed.

DEVELOPMENTAL COURSES — The Center offers various developmental courses for those desiring skill improvement or review. Some of these carry credit. Students must pay close attention to catalog information pertaining to these courses and must consult their department chairperson or Learning Skills Center personnel about the acceptability of credit.

Instructor assists a student in working on a mathematics problem in the Mathematics Laboratory of the Learning Skills Center.

The Courses	Catalog Page	Title	Credit	Comment
ENG 100	89	Basic Language Skills	3	As advised: satisfies half the composition requirement
RDG 090	111	Reading Fundamentals	3	As advised
RDG 100	111	College Reading	3	As advised
RDG 110	111	Rapid Reading	1	Elective Credit
LRS 101	111	Learning Skills: Time Scheduling & Concentration	.5	Elective Credit
LRS 102	111	Memory and Exams	.5	Elective Credit
LRS 103	111	Learning Skills: Textbook Mastery	.5	Elective Credit
LRS 104	111	Listening and Notetaking	.5	Elective Credit
LRS 110	111	Learning Skills: The Research Paper	1	Elective Credit
LRS 120	111	The Art of Thinking	1	Elective Credit
MAT 003 A,B,C	96	Basic Math Review	0	As advised

The Courses	Catalog Page	Title	Credit	Comment
CHM 102	76	Preparatory Chemistry	4	As advised
PHY 100	108	Preparatory Physics I	4	As advised
PHY 101	108	Preparatory Physics II	4	As advised
SAC	93	Human Development Courses	2-3	As advised

DROP-IN ASSISTANCE — Learning Skills Center specialists help students with short term academic difficulties, such as writing a term paper, reading a difficult textbook, or solving a complex math problem. The staff encourages students to drop in to the Center for this type of assistance.

TUTORING — When a student experiences more serious academic difficulty and is in danger of failing a course, he/she may apply to the Center for peer tutorial assistance.

Located in the Cecil C. Tyrrell Library, the Center is open from 8:30 a.m. to 4 p.m.; in addition, evening hours are posted each semester. Detailed brochures describing the various programs are available at the receptionist's desk in the Center. For additional information, call 772-5162.

GRADING INFORMATION

Because this grading policy went into effect for the Fall Semester of 1979, grades earned by students at the College prior to that date will remain as recorded.

Grades	Honor Points Per Credit Hour	Explanation
A	4	Outstanding achievement of course objectives
B	3	Significant achievement
C	2	Satisfactory achievement
D	1	Minimal satisfactory achievement
F	0	Failure to meet course objectives or dropped after 10th week
S	—	Satisfactory— (For certain
U	—	Unsatisfactory— courses only)
W	—	Withdrawal from a course between the 4th and 10th weeks inclusive (See "W" Grade below)
I		Incomplete due to special circumstances (See "I" Grade below)
IP	—	"In Progress"—for courses in which student is permitted more than one semester to complete
AU	—	Audit—not to be recorded as a grade (See "Audit" below)
T	—	Transfer credit from an accredited college

"S", "U" and "IP" Grades

The S or U grade and IP grade will apply only to specific courses determined by the appropriate departments and approved by the Vice-President for Academic Affairs. Such courses will not affect the Grade Point Average (GPA).

"W" Grade

It is the student's responsibility to initiate action to receive a grade of W between the 4th and 10th weeks inclusive. If no action is taken before the 11th week and the course is dropped, an F (or U) will be entered on the transcript. For 7½ week courses, an F (or U) will be entered on the transcript if the course is dropped after the 5th week. For 5-week courses an F (or U) will be entered on the transcript if the course is dropped after the 3rd week.

"I" Grade

A student who receives an I grade shall, within two weeks after the last class of that semester, contact his or her instructor to arrange for completion of unfinished work, in accordance with agreed upon time limits that are not to exceed one year. The instructor will then notify the registrar of the arrangements and, after the student has completed the work, of the subsequent grade to be assigned. If the student does not meet the time limit, the instructor shall direct the registrar to record the appropriate grade.

If the student does not contact the instructor during the two-week period at the end of the semester, the registrar shall record the appropriate grade as directed by the instructor.

Audit

The term "Audit" shall not be considered a grade but an "opportunity." For persons auditing a course, the letters AU will appear next to the course name on the transcript with a message statement explaining the meaning of the designation. No grade shall appear in the grade column on the transcript.

Students are encouraged to use the option of taking courses on an audit basis. Any student who completes a course by auditing will have AU recorded on his/her record in place of credit grades. He/she may not receive credit for it later, unless he/she re-registers in the course or challenges it according to the existing rules for credit-by-examination.

Students who register in a course for audit are expected to have the necessary prerequisites. In this respect students are encouraged to make full use of the College's counseling services, but the ultimate decision whether or not to enroll for audit shall be the student's responsibility. Consideration may be given to a student's request for transfer from credit to audit status or vice-versa. The end of the third week of classes is the deadline for such transfer.

Full-time students may audit courses with no additional charge, but they need approval of their department chairperson. **For part-time students,** the regular tuition schedule applies ($32 per credit hour for New York State residents and $64 per credit hour for out-of-state students). New York State residents who are **60 years of age or older** may audit courses without charge on a space available basis.

PROGRAM IDENTIFYING NUMBERS

State regulations require a listing of all curriculums, together with the degrees they lead to and their HEGIS code numbers. HEGIS stands for Higher Education General Information Survey, and the HEGIS numbers for each curriculum are official federal and state designations.

HEGIS Code	Degree	Curriculum
0506	AS	BUS-Business Administration
0901	AS	Engineering Science
4901	AAS	Individual Studies
4901	AS	Individual Studies
4901	DIPLO	Liberal Arts
4901	AA	Liberal Arts & Sciences
4901	AS	Liberal Arts & Sciences
5001	DIPLO	Business
5002	AAS	BUS-Accounting
5004	AAS	BUS-Marketing Management & Sales
5005	AAS	BUS-Secretarial Sciences, Office Sevices Assistant
5005	AAS	BUS-Secretarial Sciences Industrial
5005	AAS	BUS-Secretarial Sciences, Executive
5005	CERT	General Office
5012	CERT	Interior Design
5099	CERT	Paralegal Assistant
5099	AAS	Paralegal Assistant
5101	AS	Computer Science
5101	AAS	Data Processing
5101	AAS	Data Processing-Technical
5203	AAS	Dental Hygiene
5205	AAS	Medical Laboratory Technology
5207	AAS	Radiologic Technology
5208	AAS	Nursing
5213	AAS	Medical Record Technology
5214	AAS	Medical Assistant
5305	AAS	Chemical Engineering Technology
5306	AAS	Automotive Services Assistant
5309	AAS	Civil Engineering Technology
5310	AAS	Electrical Engineering Technology
5312	DIPLO	Industrial Safety & Occupational Hygiene
5312	AAS	Industrial Technology-Industrial Safety & Occupational Hygiene
5312	DIPLO	Industrial Technology
5312	AAS	Industrial Technology
5312	CERT	Machinist Related Instruction
5312	AOS	Tool & Die Making
5315	AAS	Mechanical Engineering Technology
5404	CERT	Dietetic Assistant
5503	DIPLO	Child Care
5503	AAS	Child Care
5505	DIPLO	Criminal Justice
5505	AAS	Criminal Justice-Police
5507	DIPLO	Fire Protection Technology
5507	AAS	Fire Protection Technology

GRADING INFORMATION (Continued)

Academic Dismissal from the College and Satisfactory Academic Progress

A student is not making **satisfactory academic progress** and will be dismissed from the College for academic reasons, if he/she has:

- 12 or more credit hours of W grades before completing 24 credit hours
- a cumulative grade point average less than 1.25 after completing 24 or more credit hours
- a cumulative grade point average less than 1.5 after completing 42 or more credit hours.

Note—"Completing" in this context means a grade of A, B, C, D or F has been recorded.

A student who recevies notification of his/her academic dismissal from the College and feels that there are extenuating circumstances may submit a petition to his/her department chairperson to rescind this action. This petition must be initiated within 10 days of the student's notification of dismissal. Academic dismissal action will not be rescinded without the approval of the student's chairperson **and** the Vice President of Academic Affairs or designee.

A student who is academically dismissed from the College may take no more than 9 credit hours during the following semester (proportionally fewer credit hours in a session less than 15 weeks) or must wait until one semester has elapsed before being eligible for readmission.

If the student chooses to take 9 or fewer credits of course work following dismissal, the course work must be jointly selected by the dismissed student and the department chairperson of the prospective curriculum to which the student will seek admission or another appropriate academic official. This joint selection procedure is necessary to promote the student's future success.

Mid-Term Grades

Only the D, I, F and U grades will be reported to students and their advisers at mid-term.

Repeating Courses

If a course is repeated, the higher grade will enter the grade point average. If a required course is failed, the department or the dean may allow the student to substitute an equivalent or similar course, rather than repeat the failed course. In such cases the higher grade will enter the grade point average.

OTHER ACADEMIC PROCEDURES

Attendance Regulations

Attendance in all scheduled course activities is expected as part of each student's responsibility for his/her own education. The policy of the College is that the student's academic achievement will determine grades and not just the statistics of presence or absence.

Student Responsibility: Each student is responsible for any work missed regardless of reason for any absence in class.

Instructor Responsibility: Each instructor is responsible for relating the significance of attendance to the course's objectives and to inform the students of this significance in the first class meeting.

Department Responsibility: Within the spirit and framework of college policy, each department may develop its own guidelines to meet its needs. Such guidelines are subject to the approval of the vice-president for academic affairs.

Student Academic Appeal Procedure

Broome Community College has established a procedure to provide students an opportunity to appeal grades in any particular course(s) or academic dismissal. Copies of this Student Academic Appeal Procedure are available in the Office of the Dean of Academic Services (W-202), and the policy also appears in the Student Handbook.

Late Registration

An applicant may not register later than one week after the beginning of each semester except by permission of the Vice-President for Academic Affairs. A late fee will be charged.

Withdrawal from the College

Broome Community College has committed itself to a philosophy of providing whatever assistance is necessary to aid the student in completing his/her academic goals. Students are strongly encouraged to seek academic and personal counseling prior to any withdrawal.

Students who decide to withdraw from the College must complete the proper termination forms available in the Registrar's Office or Counseling Center. Failure to comply may cause the individual to lose any possible refund of fees.

Length of Curriculum

Most associate degree programs are designed to be completed in two years. The college year is divided into two semesters of 15 weeks each plus an evaluation week. Some students may choose or be required to take more than four semesters to earn their degrees. Radiologic Technology students and Medical Laboratory Technology students have special clinical laboratory experience in the summer of both their freshman and senior years.

Grade Point Average

Each grade carries a specified number of honor points—4 for an A, 3 for a B, 2 for a C, 1 for a D. To determine one's grade point average, multiply the number of honor points earned, according to the letter grade, by the number of credits for the course. Add these together and divide this sum by the total number of credits taken.

For purposes of graduation eligibility, only those courses required for the degree will be included in the calculation of the grade point average.

President's List and Dean's List

Full-time students who have a semester grade point average of 3.80 or better will be named to the President's List. Such students must successfully complete a minimum of 12 hours, and courses which use the S or U grade may not be among the 12 hours.

Full-time students with a semester grade point average between 3.50 and 3.79 inclusive will be named to the Dean's List. Such students must successfully complete a minimum of 12 hours, and courses which use the S or U grade may not be among the 12 hours.

Part-time students can earn a place on the President's or Dean's Lists by having the appropriate cumulative grade point average for their most recent semesters that include at least 12 credit hours.

Graduation with High Honors or Honors

Students who graduate with a cumulative grade point average of 3.80 or better will receive the distinction of graduating with "High Honors" and those who graduate with a cumulative grade point average between 3.50 and 3.79 inclusive will graduate "with Honors."

Independent Study

Many academic departments of the College offer "Independent Study" courses which are arranged between an individual faculty member and a motivated student. The student has the responsibility to make appropriate arrangements with a faculty mentor and to secure the permission of the department chairperson before registering for independent study.

Independent Study courses are **not** intended to replace regular courses which the student was unable to schedule or which he did not complete. Rather, these courses provide an opportunity for the serious student who desires to expand his academic background beyond the scope and the depth usually found in a regular course. (See course description section for offerings.)

Absence Due to Religious Beliefs

Section 224-a of the State Education Law reads:

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he is unable, because of his religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.

2. Any student in an institution of higher education who is unable, because of his religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If classes, examinations, study or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section.

6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his rights under this section.

6-a. A copy of this section shall be published by each institution of higher education in the catalog of such institution containing the listing of available courses.

7. As used in this section, the term "institution of higher education" shall mean schools under the control of the Board of Trustees of the State University of New York or of the Board of Higher Education of the City of New York or any community college.

THE CECIL C. TYRRELL LEARNING RESOURCES CENTER

The Cecil C. Tyrrell Learning Resources Center provides a wide variety of learning resources. Housed in the center are the Library, the Audio Visual Department, the Mathematics Learning Center, the Writing Center, the Reading and Study Skills Center and an Engineering Sciences and Technologies Learning Center, as well as offices and classrooms.

A staff of professional, technical and clerical specialists offers the students a broad range of services designed to meet their academic needs. Typical library services include lending of materials, information services, access to other learning resource centers, interlibrary loan service, assistance in research techniques, and instruction in the use of materials and equipment. A coin operated photocopier is also available.

The Learning Resources Center's primary function is to support and supplement the academic programs of the college and to provide a center for serious study, research and learning. Students are encouraged to use its facilities, materials, and services fully, but properly. Requests for information services and assistance are welcomed by the staff.

The facilities have a capacity of nearly 900 users. Individual carrels, lounge furniture, multiple person tables and stools, and a limited number of small group study rooms is available. Audio-visual equipment including projectors, tape and record players, micro-film reader/printers, as well as more specialized machines, are located in the center for student use. Some typewriters are also available.

The Learning Resources Center was constructed in 1967-68 and named for the College's founding president in 1972, the year he retired after 26 years in the position. The building is an attractive and modern three-story structure, with more than 40,000 square feet of space devoted to its learning facilities.

The Learning Resources Center collections offer many different types of print and nonprint materials carefully selected to meet the academic needs of students at college level. The print collections consist of over 60,000 books, 500 current periodicals and backfiles, plus over 7,000 pamphlets.

More than 1,500 audio recordings, slides, filmstrips, maps, microfilms, multimedia kits, and other types of media add several thousand more items to the collection. An extensive file of college catalogs is maintained.

Most materials including magazines may be borrowed for use outside the center, although some restrictions are placed on reference and reserve materials. The basic loan period for books is two weeks, and for magazines and audio visual materials, one week.

Some loan periods may be extended if requested before the date the materials are due back in the center and the items not in demand. Overdue fines are not charged as a rule, but the college reserves the right to do so with proper notification.

Library cards will be issued to students upon request, but are not required for borrowing materials. Proper identification is necessary, however. Failure to return borrowed materials promptly upon notice can result in withholding of grades, transcripts and other services.

Lost and damaged materials must be replaced or paid for at current replacement costs, and the borrower is responsible for all materials charged out on his/her card.

The center is open for full service during the following hours:

Fall and Spring Semesters	
Monday—Thursday	8 am to 10 pm
Friday	8 am to 4:30 pm
Saturday	12 noon to 5 pm
Sunday	4 pm to 10 pm
Holiday and Intersession	
Monday—Thursday	8 am to 5 pm
Friday	8 am to 4:30 pm
Summer Session	
Monday, Wednesday, Thursday	8 am to 9 pm
Tuesday	8 am to 5 pm
Friday	8 am to 4:30 pm

—Counseling and Student Development Center—

The Counseling and Student Development Center provides many services for students, whether they are enrolled full-time or part-time. Students can meet with counselors in a non-threatening and informal atmosphere, as they seek to develop their potential, form realistic goals, and understand themselves emotionally and intellectually. The Center is equipped to help students:

1. Understand their basic needs in terms of social, vocational and emotional adjustment to the college setting.
2. Establish realistic educational goals and appropriate methods of achieving them.
3. Assess their strengths and weaknesses to enable them to more effectively deal with academic and personal problems.
4. Better understand their role and that of the College in the higher educational process.
5. Obtain information about transfer and career opportunities, as well as assistance in dealing with academic problems.
6. Grow in their personal development and determine appropriate values through instruction in human development courses.

The Counseling and Student Development Center, located on the second floor of the Wales Building, is staffed by professional counselors and open to all BCC students, full-time and part-time. The Center is open from 8 a.m. to 4:30 p.m., Monday through Friday, and evening hours are established during the academic year. Students should become acquainted with the Center by stopping in at their convenience or calling for an appointment (772-5185). A special brochure is available at the Center, giving details about the services.

CAREER AND LIFE PLANNING

Broome Community College offers an opportunity for students to explore interests, strengths and values in both an individual and group setting. Knowing ''what makes one tick'' is the first step in understanding goals related to self fulfillment and to the world of work. The Counseling and Student Development Center can help in the process of self-evaluation and has information on career possibilities, audio-visual aids, testing procedures and techniques used in the process of exploring career fields and making career decisions.

PERSONAL COUNSELING

Counseling is also available for students experiencing social, personal and family concerns. Counselors may make referrals to appropriate community agencies, if that should be necessary and mutually agreeable. All counseling is strictly confidential.

ACADEMIC COUNSELING

Counselors are available to help students put their academic efforts into the proper perspective by analyzing their study, social and work habits to enable them to utilize their time in the most efficient way.

TRANSFER TO 4-YEAR COLLEGES AND UNIVERSITIES

Broome Community College has developed a fine reputation for its successful preparation of students for study at senior institutions. Students desiring to continue their education are encouraged to consult with a counselor in the Counseling and Student Development Center, their faculty advisor, or department chairperson for assistance in selecting a program and/or institution that is appropriate to their goals, abilities and aspirations.

To these ends, the College conducts the Transfer Emphasis Program, which consists of visits to the campus by representatives of four-year schools to recruit and advise potential transfer students. Taking place for two weeks, usually in November and March, these visits are designed to expedite the information process necessary to insure a smooth transition between community college and various four-year programs. The representatives, generally from admissions offices, discuss life on their campuses, financial assistance possibilities and activities available, in addition to the traditional explanations of all their academic programs.

Applications for the **State University of New York** colleges and university centers are available in the Counseling and Student Development Center. Students should apply directly to all **other colleges** (non-SUNY units) by requesting an application and any other pertinent data from the admissions office of the desired college.

All students should arrange at the BCC Registrar's Office to have copies of their transcripts forwarded to the admissions offices of the colleges to which they are applying. This will insure proper transfer of applicable credits. Any requests for references and recommendations may be forwarded to the Counseling and Student Development Center, and all acceptances and rejections of applications should also be reported to the Center.

Any questions or problems regarding transfer should also be directed to the Counseling and Student Development Center, which can help students determine if another college is accredited. For information on special transfer opportunities, pages 16 and 17.

ORIENTATION PROGRAM

Freshman, transfer or re-admitted students will have an opportunity to participate in various advising, counseling and orientation sessions as well as social and cultural activities prior to and during the semester of acceptance into the College. Information concerning these activities will be mailed to all students prior to the beginning of the semester.

The staff of the Student Affairs Office endorses the concept that a community college environment should facilitate the development of the whole student

SPECIAL WORKSHOPS AND SEMINARS

The Center offers a variety of workshops and seminars throughout the college year. Those that have been offered cover such topics as relaxation techniques, career exploration, cognitive style mapping, assertiveness training.

STUDENTS FROM OTHER NATIONS

The College welcomes and encourages qualified students from other countries to enroll and is authorized by the United States Department of Justice to issue necessary Certificates of Eligibility (Form I-20). For admissions information, these students should contact the Admissions Office at Broome Community College, P.O. Box 1017, Binghamton, New York 13902.

To be admitted to the College students from other nations must:

- Demonstrate proficiency of the English Language either by taking TOEFL examination or the Michigan Test which can be administered at the College.
- Provide an affidavit of financial support and a transcript in English (or a certified translation) of all secondary school or college work.
- Show evidence of health insurance coverage. The National Association of Foreign Student Affairs offers a health plan to meet the needs of these students, and information is available directly from insurance companies or at the Broome Community College Health Service.

No housing is provided for these students. Some local residents list available housing with the College, and students are responsible for making their own housing arrangements. It is estimated that College costs and living expenses approximate $5,000 per year.

The College provides an advisor to assist students from other countries in their orientation to student life while at Broome Community College. Both academic and non-academic problems may be discussed with the advisor, whose office is in the Wales Building, Room 210.

TESTING

The Counseling and Student Development Center offers students the opportunity to engage in a testing program. When appropriate, it can be arranged for a student to take a variety of tests including personality and interest inventories. Cognitive style mapping is also available to help students better understand their individual learning preferences. The tests can help students develop self awareness and improve their decision-making ability.

HUMAN DEVELOPMENT COURSES

Courses are offered which provide students with an opportunity to examine their values, attitudes, beliefs and abilities. The courses also offer an opportunity to learn how these factors affect the quality of relationships with others. In addition, the students examine the challenge and problems of society as they relate to their development. All courses are transferable for credit. See page 93 for course descriptions.

WOMEN'S PROGRAMMING

Broome Community College counselors are responsive to all students and, in particular, the women who make up more than 50% of the current student body. The women range in age from 16 to 72, with many of them returning to school after varying numbers of years away from the classroom.

Women can learn individually and in small groups how to begin a program, schedule it into their lives, and receive information, support and encouragement. The many counseling programs the center offers can help them achieve their academic goals, whether it be a few courses or a degree to transfer to a 4 year college or to find employment.

PROGRAM FOR PEOPLE OVER 60

Any citizen of New York State who is 60 years of age or more may ''audit'' courses at Broome Community College without charge, as long as there is space available. In this connection the word ''audit'' means these students take the course by attending classes and being exposed to all the work given in class and assigned in the text. They do not have to do the homework or take the examinations, however, and they receive no letter grade or college credit. Contact the Office of Continuing Education.

Placement

Most students who attend Broome Community College will eventually enter the labor market. Getting a job, particularly that first entry level position, requires an understanding of how to contact employers and what job hunting techniques provide the best employment success. The Placement Office not only helps you to locate positions but offers assistance in resume writing and interviewing techniques.

The Placement Office lists full-time, part-time and seasonal jobs from employers who want to hire Broome Community College students and alumni. Most of these positions are related to academic programs at the College, and they are of particular value to students wishing to gain experience in their chosen field. The New York State Employment Service "Job Bank" and employment counselor are also available on a daily basis in the Placement Office (Wales Building, Room 201).

The quality of the College's academic programs is well known by many companies both locally and nationally. During the spring semester of every year, representatives of business and industry visit the campus to interview potential graduates for employment purposes. Students wishing information regarding this recruiting program should contact the Placement Office.

Individual appointments can be made to discuss job market predictions, salary expectations, and other questions related to employment.

87% of 1980 GRADUATES FOUND JOBS OR TRANSFERRED

- **833 GRADUATES IN CLASS OF 1980** at Broome Community College, and 91% of them responded to a survey. All statistics here are based on that 91% response.
- **87% OF THE 1980 GRADUATES** either found employment or transferred to 4-year colleges, thus enabling BCC to fulfill its two major missions of preparing graduates for immediate employment or transfer to 4-year colleges.
  - 54% of the graduates went to work.
  - 33% transferred to 4-year colleges.
  - 9% were unemployed at the time of the survey.
  - 4% were unavailable for work.
- **STARTING SALARIES** of those who went to work averaged $11,360 a year and ranged from $17,000 down to $5,706. About 39% reported salary information.
- **WHERE THEY WENT TO WORK**—
  74% of those who went to work found jobs in Broome County, with an additional 11% working elsewhere in the Southern Tier. In addition, 4% got jobs elsewhere in New York State, and another 11% went outside of the state.
- **WHERE THEY TRANSFERRED TO**—
  - 60% of those who are continuing their higher education transferred to colleges in the State University of New York (SUNY) system.
  - 31% to private colleges in New York State.
  - 9% to out-of-state colleges and universities.
- **LEADING EMPLOYERS,** in order:

Large industries in NY State, such as (in order) IBM, NY State Electric & Gas, Singer-Link, Eastman Kodak, Smith-Corona, Universal Instruments, Savin, Bendix Corp., Norwich-Eaton Pharmacal, Raymond Corp.
Hospitals and Nursing Homes in Broome
Small businesses in Broome
Retail stores in Broome
Out of state industry
Small to medium industry in Broome
Day care, educational, non-profit agencies in Broome
Restaurants, fast food franchises in Broome
Physicians offices in Broome
Out of state hospitals, nursing homes
Accounting and insurance companies in Broome

- **COLLEGES TO WHICH BCC GRADUATES TRANSFERRED IN 1980:**

SUNY Binghamton
Rochester Institute of Technology
Clarkson College
SUNY College at Cortland
SUNY College at Fredonia
SUNY College at Oswego
SUNY College at Geneseo
SUNY at Albany
SUNY College of Environmental Science and Forestry at Syracuse University
Cornell University
St. Bonaventure University
SUNY College at Oneonta

Student Affairs

Student affairs at Broome Community College fall within three primary areas of responsibility—student development, student services, and student management.

Student Development responsibilities include counseling, foreign student affairs, academic advisement, testing, freshman orientation, student activities, intercollegiate athletics, drug abuse education, leadership training, career development, veterans advisement, personal development courses, transfer advisement.

Student Services cover admissions, financial aids, placement, health services.

Student Management concerns itself with student discipline, rights, responsibilities, judicial system and grievance procedures.

Educational Opportunity Program (EOP)

The Educational Opportunity Program is designed for students who are economically and educationally disadvantaged. It provides economic aid and remedial and developmental assistance, with the amount of financial aid based on need. Students who do not require financial assistance under this program may benefit from the educational services offered by EOP. To be funded by EOP, students must provide appropriate income information, and all students must be New York State residents as this is a state program. The EOP Office at the College is located in the Cecil C. Tyrrell Library—phone 772-5109.

Special Services Program

The Special Services Program at Broome Community College is a federally funded program working jointly with State University of New York (SUNY) at Binghamton.

The program provides counseling services, tutorial help and information concerning other student needs. Tutoring sessions are held during the day at Broome Community College and also evenings and weekends at designated off-campus spots. The Special Services counselor is located in the Cecil C. Tyrrell Library—phone 772-5109.

PLACEMENT

THE ACADEMIC AREAS

Summary of placement figures for each of Broome Community College's five academic areas Percentages are based upon the number of graduates heard from and not the total number Salary information is for entry level positions, those who had jobs before enrolling at BCC and kept them are not included

BUSINESS 317 graduates, 54% employed, 12% unemployed, 30% transferred, 4% unavailable for work. Salary info $9,531 average, $17,000 to $6,000 range

HEALTH SCIENCES 149 graduates, 70% employed, 12% unemployed, 11% transferred, 7% unavailable for work Salary info $10,856 average, $14,000 to $7,280 range

LIBERAL ARTS—182 graduates, 29% employed, 8% unemployed, 59% transferred, 4% unavailable for work Salary info $8,576 average, $12,500 to $5,706 range

SCIENCE AND ENGINEERING TECHNOLOGY 155 graduates, 61% employed, 2% unemployed, 36% transferred, 1% unavailable for work. Salary info—$13,533 average, $16,874 to $7,800 range

SPECIAL CAREER PROGRAMS 30 graduates, 73% employed, 15% unemployed, 12% transferred

CURRICULUMS

Following is a summary of each curriculum in BCC's five academic areas in which there were graduates last year. Percentages are based on number of graduates reporting, not total number

LIBERAL ARTS AND SCIENCES

Salary information not available in this category, except where noted

ASSOCIATE IN ARTS DEGREE 146 graduates, 29% employed, 8% unemployed, 58% transferred, 5% unavailable for work Salary info $8,576 average, $12,500 to $5,706 range

ASSOCIATE IN SCIENCE DEGREE 5 graduates, 20% employed, 20% unemployed, 60% transferred

CHILD CARE EMPHASIS—2 graduates, 100% employed

COMPUTER SCIENCE EMPHASIS—13 graduates, 25% employed, 17% unemployed, 58% transferred

CRIMINAL JUSTICE AREA—9 graduates, 57% employed, 43% transferred

MENTAL HEALTH EMPHASIS 7 graduates, 100% transferred

SPECIAL CAREER PROGRAMS

Generally, graduates of this program receive degrees through part time evening study Salaries are not reported, as most are not entry level

CHILD CARE—16 graduates, 86% employed, 7% unemployed, 7% transferred

CRIMINAL JUSTICE—7 graduates, 57% employed, 43% unemployed

FIRE PROTECTION TECHNOLOGY 4 graduates, 50% employed, 50% transferred

INDIVIDUAL STUDIES 1 graduate, 100% employed

INDUSTRIAL SAFETY & OCCUPATIONAL HYGIENE—1 graduate, 100% employed

PARALEGAL ASSISTANT—1 graduate 100% transferred

BUSINESS

ACCOUNTING—76 graduates, 47% employed, 15% unemployed, 27% transferred, 11% unavailable for work. Salary info—$8,550 average, $10,500 to $6,500 range

BUSINESS ADMINISTRATION—92 graduates, 25% employed, 12% unemployed, 60.5% transferred, 2.5% unavailable for work. Salary info—$11,675 average, $17,000 to $7,400 range

MARKETING GENERAL BUSINESS—29 graduates, 92% employed, 4% unemployed, 4% transferred. Salary info—$11,080 average, $15,000 to $6,100 range.

MARKETING MANAGEMENT—34 graduates, 47% employed, 13% unemployed, 30% transferred, 10% unavailable for work. Salary info—$10,750 average, $16,000 to $6,500 range.

MARKETING SALES—41 graduates, 86% employed, 6% unemployed, 8% transferred. Salary info—$8,867 average, $12,500 to $6,000 range

OFFICE SERVICES—11 graduates, 82% employed, 9% unemployed, 9% transferred. Salary info—$9,048 average, $10,296 to $7,800 range.

SECRETARIAL SCIENCE—34 graduates, 79% employed, 15% unemployed, 6% transferred. Salary info—$8,743 average, $11,000 to $6,337 range

HEALTH SCIENCES

DENTAL HYGIENE—21 graduates, 75% employed, 5% unemployed, 15% transferred, 5% unavailable for work. Salary info—$10,607 average, $11,500 to $8,000 range.

MEDICAL ASSISTANT—17 graduates, 88% employed, 6% unemployed, 6% transferred. Salary info—$8,222 average, $9,360 to $7,280 range.

MEDICAL LABORATORY TECHNOLOGY—12 graduates, 33% employed, 25% unemployed, 33% transferred, 8% unavailable for work. Salary information not available.

MEDICAL RECORD TECHNOLOGY—15 graduates, 67% employed, 13% unemployed, 7% transferred, 13% unavailable for work. Salary info—$8,276 average, $10,500 to $7,280 range.

NURSING—68 graduates, 76% employed, 13% unemployed, 8% transferred, 3% unavailable for work. Salary info—$11,813 average, $14,000 to $7,800 range.

RADIOLOGIC TECHNOLOGY—16 graduates, 50% employed, 12.5% unemployed, 12.5% transferred, 25% unavailable for work. Salary info—$11,664 average, $13,500 to $9,828 range.

ENGINEERING AND ENGINEERING TECHNOLOGY

CHEMICAL ENGINEERING TECHNOLOGY—20 graduates, 80% employed, 20% transferred. Salary info—$14,728 average, $15,652 to $12,700 range.

CIVIL ENGINEERING TECHNOLOGY—10 graduates, 78% employed, 11% unemployed, 11% transferred. Salary info—$12,429 average, $15,600 to $7,800 range.

ELECTRICAL ENGINEERING TECHNOLOGY—40 graduates, 82% employed, 3% unemployed, 15% transferred. Salary info—$13,456 average, $16,874 to $9,000 range.

ENGINEERING SCIENCE—43 graduates, 10% employed, 88% transferred, 2% unavailable for work. Salary information not available.

INDUSTRIAL TECHNOLOGY—22 graduates, 90% employed, 5% unemployed, 5% transferred. Salary information not available.

MECHANICAL ENGINEERING TECHNOLOGY—20 graduates, 70% employed, 25% transferred, 5% unavailable for work. Salary info—$13,127 average, $14,800 to $10,800 range.

Health Service

The College provides a Health Service which is available to all students. Professional staff includes a part-time physician available several mornings a week for two hours and one full-time registered nurse during regularly scheduled class periods.

The Health Service provides care of injuries and minor illness, health counseling and referral service to community resources. It is a resource area for relevant student problems, and it furnishes a non-threatening environment for personal problems. All records are confidential and health data is released only with the written authorization of the student. Common procedures performed by the Health Service include blood, urine tests, throat cultures, screening for V.D., pregnancy testing, breast exams, birth control counseling.

The Health Service is located on the first floor of the Wales Building. Cots are available for students to obtain a few quiet moments in a busy schedule.

An Emergency Squad composed of students assists the Health Service to bring quick, efficient assistance in time of an emergency. Students are encouraged to become active in this important function on campus.

Living Accommodations

The College has no dormitory facility and assumes no responsibility for student housing. As a service to students, the director of the Student Activities' Office maintains an up-to-date record of housing accommodations which landlords submit as being available. This listing is neither an approval nor rating by the College, nor will the College become a third party in any arbitration between students and landlords. Housing arrangements must be made directly by students and parents with local landlords.

Room and Board

The cost of room and board for out-of-town students is dependent upon the demands of the students. The average cost varies from $60 to $70 per week.

STUDENT ACTIVITIES

The College recognizes the fact that student experiences outside the classroom are important in one's over-all development. For this reason the College supports an active co-curricular program as a complement to classroom studies. The variety of activities on the campus reflects the diversification of student interest and provides the opportunity for students to develop talents, leadership ability and a sense of social responsibility.

Students should check carefully for crediting arrangements for co-curricular activities. Liberal Arts, for example, permits a maximum of six such credits to be used in meeting Associate in Arts and Associate in Science degree requirements.

United Student Government

The United Student Government is the official representative organization of the student body. As such, it is consulted by the trustees, administration, faculty and staff when student input is desired.

In order to obtain the broadest possible cross-section of the campus, membership is derived from the following areas:

A. The Freshmen and Senior class.
B. Such educational areas as Engineering Technologies, Health Sciences, Liberal Arts, Business.
C. The special interest groups—athletics, media, clubs, social activities.

Membership in the United Student Government is by campus-wide election or by appointment, as appropriate.

Some functions of the Student Government are:

1. Coordination, distribution, and supervision of funds for student activities.
2. Recommendation of policy to the College Administration via the College Senate.
3. Having representatives serve on the Faculty-Student Association.

The United Student Government is a member of the Community College Student Association and coordinates the activities of this college with other colleges and universities statewide.

Program Board

The Program Board is one of the most active and hard working organizations on campus. The Board is responsible for sponsoring all social events as well as college hour and convocation programs. These events, including mixers, movies, coffee houses, concerts, spring picnic, semi-formals and programs featuring famous artists and speakers, are funded with the student activity fee. The Program Board also affords students an opportunity to purchase tickets at reduced prices to a variety of programs at the Broome County Veterans Memorial Arena and the Forum and other off-campus locations.

Media Board

The students involved in activities under the Media Board have the opportunity to experiment with different forms of communication. The Fulcrum and Citadel require literary and photographic interests and skills and the Audio-Media Organization appeals to those with an interest in radio broadcasting and helps to develop those talents.

Fulcrum (campus newspaper) offers a variety of information for the students. It speaks out on important issues, offers the humerous side of student life, and gives the students a chance to voice their opinions through editorials and human interest stories.

Citadel (the yearbook) provides an opportunity for students to work on a more lasting project and to cover the entire college year in words and pictures.

Audio-Media Organization is for students who want to be involved in live broadcasting. This organization provides the cafeteria with recorded music—radio style—and always needs enthusiastic disc jockeys for its "WBCC" operation in the cafeteria.

The Union

The Union is a one-story brown building that houses varied facilities for students to enjoy during their leisure hours. It is open from 8 in the morning until 5 in the afternoon and has such recreational activities as foosball, ping pong and pool tables, a couple of pianos, and pinball machines. All can be used for a small fee. There is also a lounge with a fireplace, a video beam projector television, and vending machines. In addition, the Union is the location of a number of student offices such as United Student Government, Program Board, Fulcrum, and Citadel. The College's Student Activities Office is also located there.

Student Center

The busiest and most versatile building on the Broome Community College campus is the Student Center. It houses the gymnasium, the College Cafeteria, Book Store, and the Little Theatre, and many of the social events are held here. This building is used by day and evening students of all curriculums.

Adult Lounge

Two comfortable rooms in the Y-Building located near the Nursing Building at 901 Front Street have been maintained for those students wishing an area for study, conversation, a quiet lunch or coffee break.

Club Council

Club Council is the body that governs the actions and the funding of all the clubs on campus. There are over 30 clubs to meet the needs of a variety of student interests. One representative from each club is expected to attend Club Council meetings. Every club on campus is open for any student who pays the student activity fee. Some of the clubs are curriculum and academically oriented, while others have a social or special interest emphasis.

Theatre/BCC

Complementing the studio and academic course work in theater is the group known as Theatre/BCC. All students are invited to participate, whether or not enrolled in formal course work.

Theatre/BCC enjoys a fine artistic reputation, presenting a broad range of theatrical styles, and provides its actor/technicians with varied opportunities for ensemble as well as individual training. Theatre/BCC provides a challenging and exciting experience for students with an interest in the theater, and most of its productions are performed in the intimate setting of the College's Little Theater.

NOTE: Students may receive transferable credit for active participation in College Choir, the Instrumental Music Association and Theatre/BCC. The conditions for this credit are available from one's advisor.

Music

College Choir is sponsored jointly by the Liberal Arts Division and United Student Government. Choristers have gained an excellent reputation and are exposed to a broad range of choral literature reflecting the varied demands for community concerts. The chorus traditionally produces its own Christmas program for local television and presents an annual Spring Concert, as well as performing for local church and civic organizations. The College Choir, moreover, makes an annual concert tour to such places as Washington, D.C., or Williamsburg, Va. Rehearsals are held weekly and all students as well as faculty and staff are welcome to sing in the ensemble.

The **Instrumental Music Association** offers students who have previously played instruments the chance to continue their involvement in small ensembles (brass, woodwind, string and recorder) and the College Stage Band. A limited program of private coaching is also available.

BCC Jazz Ensemble offers instrumentalists a chance to perform jazz and jazz-rock on campus, in the community, at competition and on tour. Its 20 members strive for high quality performing and the enjoyment of working together toward this goal. A group of eight singers is used for popular arrangements with the band.

Improvisation, beginning and intermediate piano, beginning and intermediate voice, beginning guitar reading classes are available to BCC students.

The Theater and Music Programs have joined in musical theater productions. Any BCC students who are interested may audition for performance on stage or in the orchestra.

Other Clubs

In addition to the co-curricular activities already listed, other organizations are active on campus. These include:

Art and Design Club
Audio Media
Aviation Club
Camera Club
Campus Bible Fellowship
Cheerleaders
Circle K
Emergency Squad
Ski Club
Inmate Education
International Student Organization
Lacrosse Club
Minority Student Organization
Newman Club
Outing Club
Weight Club

These are open to all full-time students and to part-timers who pay the student activity fee. Details are available in the Student Handbook and from the Director of Student Activities.

Professional Society Affiliates

Since exposure to organizations in their fields of study is considered of benefit to students, many curriculums have their own affiliates of national professional societies. Among these are:

Society of Manufacturing Engineers (SME) for Mechanical Engineering Technology students.

Dental Hygiene Association, an affiliate of the American Dental Hygiene Association.

Institute of Electrical and Electronics Engineers (IEEE) for Electrical Technology students.

In addition, some meetings of local professional societies are attended by students, as the **American Chemical Society** invites Chemical Technology students to its meetings. Some professional societies hold meetings on campus, too, and students are always welcome to attend. Thus students have the opportunity to become acquainted with professional people in their fields of study and to attend lectures and see films and demonstrations of new developments.

Curriculum Organizations

In addition to the student organizations listed above that are affiliated with professional societies, the College has a number of associations that are identified with specific curriculums. Among these are the Business Club, the Civil Technology Association, the Medical Assistants Association, the Medical Laboratory Technology Society, the Student Nurses Association, the Lively Arts from the Liberal Arts curriculum, and the Student Organization of Radiologic Technologists.

Honor Societies

Phi Theta Kappa

In 1962, the Mu Eta Chapter of Phi Theta Kappa was established at the College. Phi Theta Kappa is a national honor society at junior colleges, similar in purpose to Phi Beta Kappa at the four-year colleges and universities. Mu Eta Chapter is open to freshmen and seniors at Broome CC who have achieved outstanding academic grades, been especially active in co-curricular participation, demonstrated outstanding qualities of leadership and responsibility, and made noteworthy contributions to the College.

Sigma Phi Alpha

The national dental hygiene honor society, Sigma Phi Alpha, has a chapter at Broome CC, the Upsilon Chapter. Senior Dental Hygiene students who rank highest in scholarship and who exhibit potential qualities for future growth and attainment are selected for membership.

Tau Alpha Pi

The national honor society for students in engineering technology programs, Tau Alpha Pi has established a chapter on the Broome Community College campus. It is the Beta Theta Chapter. This society recognizes outstanding academic achievement in BCC engineering technology curriculums in Electrical, Civil, Chemical and Mechanical Technology.

Intramurals

Physical activity is a vital part of an individual's life, regardless of physical capability. With this in mind, the Physical Education Department coordinates an intramural program for all students enrolled at the College. Students are invited to participate in team sports such as soccer, gym hockey, basketball, volleyball and softball. For those interested in individual competition or "play for fun", sports such as tennis, golf, badminton, horseshoes and bowling are also offered.

Men's Sports

Broome Community College fields men's teams in eight varsity sports — cross country, soccer, wrestling, basketball, ice hockey, tennis, golf and baseball.

BCC athletic teams have earned an excellent reputation in two-year college competition. Included in the basketball team's more than 770 victories are 10 regional titles and the 1980-81 record was 30 victories and 4 losses. The tennis team has also been a frequent regional winner, and the baseball team is usually a regional factor, and it has three times been a regional champion. The golf team had a recent stretch of 39 wins in 40 dual matches and has sent golfers to both the regional and national tournaments. The ice hockey team, which recently changed from club to varsity status, has shown rapid improvement and this past season posted an excellent record of 14 wins against 5 losses. The soccer team has also been good enough in recent years to be invited to post-season competition.

Women's Sports

Broome Community College fields women's teams in five varsity sports—tennis, cross country, volleyball, basketball and softball—and they have achieved some fine sports success in recent years. The tennis team has captured several individual and team regional titles, and the volleyball team was invited to the first-ever national volleyball tournament. Both the basketball and softball teams also posted winning records and have participated in recent regional playoffs.

About Broome Community College

Broome Community College is a comprehensive community college. It has programs designed to prepare graduates both for immediate employment and for transfer to four-year colleges and universities at the junior, or third-year level.

In addition to its daytime enrollment, which numbered 3,300 last year, the college has a continuing education program which had about 3,000 part-time evening students in the fall of 1980 and about 1,500 taking courses during the Summer Session.

The College is co-educational, publicly-supported, and has historically attracted about two-thirds of its student body from Broome County and one-third from outside the county. The ratio has recently been closer to 80% and 20%.

The day student body can be classified into six parts, based on study objectives—the business programs, engineering and engineering technology curriculums, health science courses, liberal arts programs, computer studies, and special career offerings.

The College is sponsored by Broome County, supervised by the State University of New York, and accredited by both professional and educational organizations (see inside front cover).

The Campus

The College campus is located three miles north of Binghamton on Upper Front Street, which is Route 11 and Route 12 at this point running alongside of Interstate 81. Nine of the 12 buildings form two contiguous quadrangles to make a compact campus layout.

Most of the buildings are two stories high, of modern functional design, and made of brick with colored panelwall facing. They lie in a suburban setting in the virtual center of the College's 120 acres of land.

In addition to classrooms and laboratories, the campus has its own cafeteria, gymnasium and athletic fields, and a Little Theater. These facilities add up to make the campus a multi-million dollar investment in the youth of Broome and surrounding counties.

Campus Carillon

The College has a Maas-Rowe symphonic carillon, which tolls the hours with the Westminster chimes and occasionally plays musical selections through its automatic music roll attachment. The carillon was a gift to the College, donated by former trustee Dr. Leopold Eckler and the College Foundation.

The Community

The community is an industrial and agricultural area in New York State's Southern Tier. It is in the approximate center of the state, measuring from east to west, and its southern extremity touches the Pennsylvania state line.

Binghamton is the principal city in Broome County, but it is only a part of the community known as the Triple Cities. Endicott and Johnson City, along with Vestal and other suburbs, help to make the community much larger in population and geography than the city of Binghamton.

Binghamton has a population of about 55,000 and Broome County's population exceeds 200,000. Diversified industry in the community includes such firms as IBM, General Electric, Singer Co. (formerly Link), GAF, New York State Electric & Gas Corp., and Endicott Johnson.

The College has become an integral part of the community since it was started in 1946. Many of the campus facilities are offered at nominal cost for use by responsible organizations, and most of the College's curriculums are designed to help fill the economic needs of the county.

History

The College graduated its first class in 1949. These students had entered what was then known as the New York State Institute of Applied Arts and Sciences at Binghamton in the fall of 1947. The original institute was one of five founded in the state in 1946, following the pattern of six agricultural and technical institutes which New York had established earlier in the century. The first programs offered were all occupational in nature and included Chemical, Electrical and Mechanical Technology, as well as Medical Office and Technical Office Assistant courses.

In 1953 New York relinquished operating control of the school to a new sponsor, the County of Broome, under provisions of the State Community College Law, and the name was changed to Broome County Technical Institute. In 1956 the name was again changed, to Broome Technical Community College, to reflect the increasingly comprehensive nature of the educational offerings. In 1971 the name became Broome Community College as the scope of the curriculums continued to expand.

The Civil Technology program was added to the five original curriculums in 1957, Dental Hygiene was introduced in 1956, and the Business programs were expanded to include offerings in Accounting, Marketing, Engineering Secretarial in the 1950's. Executive Secretarial was added in the early 1960's.

A big change in the College's programs came about in the 1950's as a result of a new emphasis on university-parallel or transfer programs to go along with the college's occupational offerings. Engineering Science, the first two years of an engineering program, was introduced in 1958, Liberal Arts and Sciences in 1962 and Business Administration in 1963.

In the late 60's interest began to develop in the health science field. As a result, the College introduced a degree-granting program in X-Ray Technology in 1965, added Medical Laboratory Technology in 1966, Nursing a year later, and Medical Record Technology in 1969. The College was responding to the changing needs of the area and adjusting its offerings to fulfill the mission of catering to the post-high school educational needs of the community.

Criminal Justice and Child Care have been added since, and degree programs in Individual Studies and in Industrial Safety and Occupational Hygiene were recently introduced, along with Office Services Assistant. Additional new offerings were recently introduced in Computer Studies and in Tool and Die Making.

For its first five years, the school was housed in a refurbished State Guard Armory in downtown Binghamton. This building was gutted by fire in September 1951, and for the next five years Kalurah Temple and two other buildings in the city provided temporary quarters. In 1957 the College moved to its present campus on the north side of Binghamton. The first addition to the original campus came with the construction of Titchener Hall, which was dedicated in 1963. The Library Building was completed five years later, and the Business Building opened in 1972.

BOOK STORE

The College Book Store, or Campus Store as it is sometimes referred to, is located in the Student Center and actually has two areas of operation—the Textbook Department and The Campus Shop.

In the Textbook Department students may purchase their required books. To avoid standing in long lines the first week of classes, students are urged to purchase their books during the advance sale period, which immediately precedes the start of classes. It is advisable to purchase all required textbooks early in the semester. In addition to the obvious reason of using them for studying, all unsold books must be returned to the publisher shortly after the semester begins.

The Campus Shop offers a variety of items. In addition to such classroom supplies as notebooks, paper, pens and binders, there are art and drafting materials, imprinted gift items and sportswear, and an extensive selection of paperbacks.

The store manager welcomes students to speak to him about any special problems, suggestions or requests.

ALUMNI

The Broome Community College Alumni Association provides a link between the College and its Alumni, and its activities include the awarding of a number of scholarships each year and the active and monetary support of various college programs.

Any graduate may become a member by paying the modest lifetime dues of $20. There are no annual dues. Membership entitles alumni to discounts for some on-campus functions; group term/life insurance at special rates; voting eligibility for the Board of Directors including rights to stand for election to a seat on the Board. Alumni also receive the College's quarterly newsletter, BCC TODAY, and the Alumni Association conducts an annual Dinner-Dance. Alumni are encouraged to join and participate.

FACULTY-STUDENT ASSOCIATION

The Faculty-Student Association of Broome Community College, Inc., is an educational corporation designed to provide to the College, and particularly to the students and faculty, services that are not included in the regular College budget.

It provides the corporate organization through which the student fees are expended under a budget prepared by the United Student Government. It also operates the College Book Store.

Through the modest earnings of the Book Store the income from student fees is augmented to support new or special activities.

The association is governed by a board of directors elected by members who hold certain offices on campus.

The operating philosophy is to make the educational program outside of the classroom a well-rounded supplement to the academic experience of the student.

Programs of Study by Curriculum

The academic programs, whose display of courses appears on pages 32 to 56, are designed primarily for full-time students of the College. It is possible, however, for one to study for an associate degree in any of these curriculums on a part-time basis. To do this, one should contact the appropriate department chairperson. The College's programs that are intended mainly for part-time students appear on pages 57 to 69.

DEPARTMENT CHAIRMAN, Thomas Rossi
Business Building, Room 108
Telephone 772-5133

ACADEMIC ADVISING, William Matechak
Business Building, Room 106
Telephone 772-5171

The Business Department offers courses of study in three areas—Accounting, Business Administration and Marketing. In addition, emphases are offered within these areas in banking, management and sales. These programs were planned with the assistance of advisory committees, made up of businessmen and women currently working in the fields.

To assist the incoming student in selecting the proper option, all have a common first semester. Thus, the final decision of programs can be delayed until registration for the second semester.

Cooperative work experience is available to many business students. This course offers the student both first-hand practical experience and college credit.

A majority of these programs is designed to prepare the graduate for immediate employment. Others, such as Business Administration, are designed to facilitate transfer to a four-year college or university. However, transfer of some courses is possible from each of the programs.

As every college has its own transfer policy, the number of credits accepted will vary. So as soon as students identify the school to which they wish to transfer, they should contact that institution to determine the courses which are acceptable. Schools with the American Assembly of Collegiate School of Business Accreditation often accept BUS 100 and 101 Accounting I and II, BUS 118 and BUS 120 Business Law I and II, BUS 115 Business Statistics and BUS 110 Introduction to Business.

Student demonstrating the use of a product in a marketing class.

BUSINESS ADMINISTRATION

FIRST YEAR

Fall Semester

		Hours per Week		Credits per
		Class	Lab	Semester
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

		Class	Lab	Credits
BUS 101	Accounting II	4	0	4
BUS 120	Business Law II	3	0	3
CST 110	Introduction to Data Processing	3	0	3
*MAT 139	Algebra			
	or	3-4	0	3-4
BUS 115	Business Statistics			
ENG 120	Written Expression	3	0	3
		16-17	0	16-17

*If a student has passed Mathematics 11 or intermediate algebra in high school, he/she takes BUS 115 Business Statistics.

SECOND YEAR

Fall Semester

		Class	Lab	Credits
Elect 1 of the following 4 courses:				
BUS 200	Intermediate Accounting I	(4)	0	(4)
BUS 249	Personnel Management	(3)	0	(3)
CST	Computer Programming Elective	(2)	(2)	(3)
	Liberal Arts Elective	(3)	0	(3)
ECO 110	Introduction to Micro-Economics	3	0	3
MAT 121	Finite Mathematics	3	0	3
	Lab Science Elective	3	3	4
	Liberal Arts Elective	3	0	3
PED	Physical Education	2	0	1
		16-18	3-5	17-18

Spring Semester

		Class	Lab	Credits
Elect 1 of the following 4 courses:				
BUS 201	Intermediate Accounting II	(4)	0	(4)
BUS 245	Management: A Behavioral Approach	(3)	0	(3)
	Liberal Arts Elective	(3)	0	(3)
	Computer Programming Elective	(2)	(2)	(3)
ECO 111	Introduction to Macro-Economics	3	0	3
MAT 122	Introduction to Calculus	3	0	3
	Lab Science Elective	3	3	4
	Liberal Arts Elective	3	0	3
		14-16	3-5	16-17

ACCOUNTING

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits
BUS	101	Accounting II	4	0	4
CST	110	Introduction to Data Processing	3	0	3
ENG	120	Written Expression II	3	0	3
SPK	102	Effective Speaking	3	0	3
		Elect 1 of the following:			
BUS	115	Business Statistics	3	0	3
BUS	120	Business Law II			
BUS	157	Report Writing			
			16	0	16

SECOND YEAR

Fall Semester

			Class	Lab	Credits
BUS	200	Intermediate Accounting I	4	0	4
BUS	205	Cost Accounting I	4	0	4
PHS	111	Physical Science for Today	2	2	3
		Social Science Elective	3	0	3
		Elect 1 of the following			
BUS	245	Management: A Behavioral Approach	(3)	(0)	(3)
BUS	295	Accounting Seminar	(4)	(0)	(4)
CST		A programming language course	(2)	(2)	(3)
			15-17	2-4	17-18

Spring Semester

			Class	Lab	Credits
BUS	201	Intermediate Accounting II	4	0	4
BUS	206	Cost Accounting II	4	0	4
*MAT	117	Elementary Finite Mathematics with Algebra	(4)	(0)	(4)
		or			
		Liberal Arts Elective	(3)	(0)	(3)
		Social Science Elective	3	0	3
		Elect 1 of the following			
BUS	270	Decision Making	(3)	(0)	(3)
BUS	295	Accounting Seminar	(4)	(0)	(4)
CST		A programming language course	(2)	(2)	(3)
			16-19	0-2	17-19

*If a student has passed Mathematics 11 or intermediate algebra in high school, he/she takes a Liberal Arts elective.

ACCOUNTING—BANKING EMPHASIS

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits
ECO	111	Introduction to Macro-Economics	3	0	3
BUS	101	Accounting II	4	0	4
BUS	120	Business Law II	3	0	3
ENG	120	Written Expression II	3	0	3
PSY	110	Psychology	3	0	3
			16	0	16

SECOND YEAR

Fall Semester

			Class	Lab	Credits
BUS	245	Management: A Behavioral Approach	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
PHS	111	Physical Science for Today	2	2	3
†ECO	253	Money and Banking	3	0	3
			14	2	15

Spring Semester

			Class	Lab	Credits
BUS	249	Personnel Management	3	0	3
BUS	224	Business Finance	3	0	3
BUS	152	Selling Fundamentals	3	0	3
		Social Science Elective	3	0	3
		*Business Elective	3-4	0	3-4
			15-16	0	15-16

*Suggested Business Electives include such American Institute of Banking (AIB) courses as Analyzing Financial Statements, Installment Credit, Principles of Bank Operations, Supervision and Personnel Administration, as well as BUS 297 Co-operative Work Experience.

†If enrollment does not justify offering daytime sections, students must attend evening classes in this subject.

MARKETING

MANAGEMENT EMPHASIS

FIRST YEAR
Fall Semester

			Hours per Week Class	Lab	Credits per Semester
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits
BUS	101	Accounting II	4	0	4
BUS	120	Business Law II	3	0	3
ENG	120	Written Expression II	3	0	3
*MAT	117	Elementary Finite Mathematics with Algebra	4	0	4
		or			
		Liberal Arts Elective	(3)	0	(3)
ECO	110	Micro Economics	3	0	3
			16-17	0	16-17

SECOND YEAR
Fall Semester

			Class	Lab	Credits
BUS	115	Business Statistics	3	0	3
BUS	152	Selling Fundamentals	3	0	3
BUS	245	Management: A Behavioral Approach	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
		Social Science Elective	3	0	3
			18	0	18

Spring Semester

			Class	Lab	Credits
BUS	224	Business Finance	3	0	3
BUS	270	Decision Making	3	0	3
BUS	249	Personnel Management	3	0	3
PHS	111	Physical Science for Today	2	2	3
		Elect 1 of the following:			
CST	118	Computer Programming—COBOL	(2)	(2)	(3)
CST	120	Computer Programming—FORTRAN	(2)	(2)	(3)
		Business Elective	(3)	(0)	(3)
			13-14	2-4	15

*If a student has passed Mathematics 11 or Intermediate Algebra in high school, he/she takes a Liberal Arts elective.

SALES EMPHASIS

FIRST YEAR
Fall Semester

			Hours per Week Class	Lab	Credits per Semester
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
BUS	118	Business Law I	3	0	3
BUS	141	Marketing	3	0	3
ENG	110	Written Expression I	3	0	3
			15	0	15

Spring Semester

			Class	Lab	Credits
BUS	120	Business Law II	3	0	3
PSY	110	Psychology	3	0	3
BUS	152	Selling Fundamentals	3	0	3
BUS	249	Personnel Management	3	0	3
ENG	120	Written Expression II	3	0	3
			15	0	15

SECOND YEAR
Fall Semester

			Class	Lab	Credits
BUS	229	Advertising	4	0	4
CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
PHS	111	Physical Science for Today	2	2	3
BUS		Business Elective	3	0	3
ECO	110	Micro Economics or	3	0	3
SOC	110	Introduction to Sociology			
			18	2	19

Spring Semester

			Class	Lab	Credits
BUS	129	Consumer Behavior	3	0	3
BUS	157	Business Report Writing	3	0	3
BUS	242	Marketing Seminar	3	0	3
BUS	245	Management: A Behavioral Approach	3	0	3
BUS	264	Retailing	3	0	3
		Liberal Arts Elective	3	0	3
			18	0	18

CHEMICAL ENGINEERING TECHNOLOGY

FIRST YEAR

Fall Semester

		Hours per Week		Credits per
		Class	Lab	Semester
ENG 110	Written Expression I	3	0	3
CHM 161	Chemistry	3	3	4
MAT 141	College Algebra and Trigonometry	4	0	4
PHY 141	Physics	3	2	4
		13	5	15

Spring Semester

		Class	Lab	Credits
ENG 150	Technical Writing	3	0	3
CHM 162	Chemistry	3	3	4
MAT 142	Applied Calculus I	4	0	4
PHY 142	Physics	3	2	4
CST 122	Scientific Computer Programming—FORTRAN	2	2	3
		15	7	18

SECOND YEAR

Fall Semester

		Class	Lab	Credits
CHM 261	Organic Chemistry	3	6	5
CHM 265	Analytical Chemistry	3	6	5
CHM 271	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

Spring Semester

		Class	Lab	Credits
CHM 262	Organic Chemistry	3	6	5
CHM 266	Analytical Chemistry	3	6	5
CHM 272	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

GRADUATION REQUIREMENT: 69 CREDITS

DEPARTMENT CHAIRMAN, James Spalik
Science Building, Room 108
Telephone 772-5009

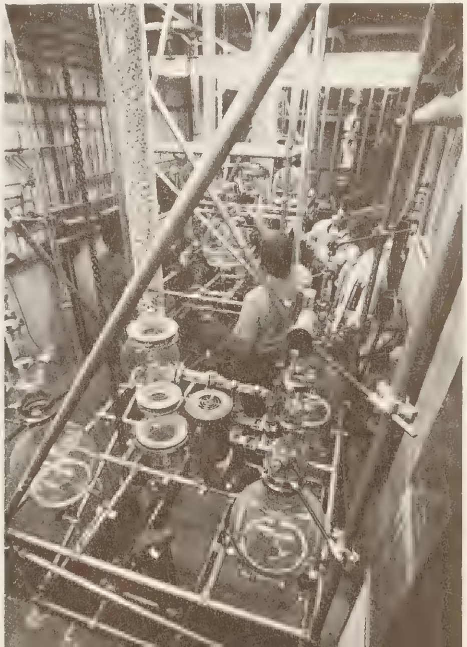
The Chemical Engineering Technology curriculum is designed to meet the increasing demand for chemical technicians. Graduates of the Chemical Engineering Technology program have the education and training which qualifies them for immediate gainful employment and/or further study for advanced degrees. This background makes the Chemical Engineering Technology graduates highly sought after by employers and concurrently affords them the flexibility to advance academically.

Chemical technicians of both sexes have filled a vital manpower need in companies and organizations where background in various areas of chemistry is necessary or desirable. The constant development of new products, for example, creates a demand for chemical technicians.

Employers of chemical technicians include IBM, GAF, Eastman Kodak, Allied Chemical, DuPont, Norwich-Eaton Pharmaceuticals, GE, American Cyanamid, Union Carbide, Bristol Laboratories, Warner-Lambert and many other industrial firms as well as government agencies, hospitals and educational institutions.

Initial positions are usually in a research, development, process, quality control or analytical laboratory or in a pilot plant. In these positions a chemical technician may work for a senior staff member or be a member of a group working in a particular area. Experienced chemical technicians have become supervisors, group leaders, technical salesmen and research and development technicians.

This curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET). This is the new name for the Engineers Council for Professional Development (ECPD).



Students performing a distillation experiment in the Chemical Processes Laboratory.

CHILD CARE

DEPARTMENT CHAIRMAN, Francis J. Short
Department of Special Career Programs
Mechanical Building, Room 219
Telephone 772-5087

COORDINATOR: Marilyn Schafer
Mechanical Building, Room 215
Telephone 772-5038

This Child Care program leads to an Associate in Applied Science (AAS) degree and is designed to prepare graduates for immediate employment or, in the case of those students who are already working in the Child Care field when they enroll, to improve their capabilities and increase their opportunities for advancement. It is open to students on both a full-time and a part-time basis.

The starting salary for graduates of the AAS degree program in Child Care who go to work immediately after graduation is between $6,800 and $10,000 a year for those who become directors and $5,000 to $7,000 for those who become teachers or teacher aids. These figures are for 10-month positions.

PLEASE NOTE

The curriculum display shown here is for full-time students, and they should be aware that careful advisement is necessary to enable them to be properly scheduled in this program to complete the work in two years. Anyone interested in enrolling as a full-time student should, therefore, consult with the coordinator or department chairman first. The curriculum display for part-time students appears on page 61.

FIRST YEAR

Fall Semester

			Hours per Week Class	Hours per Week Lab	Credits per Semester
ENG	110	Written Expression	3	0	3
PSY	110	General Psychology	3	0	3
SOC	110	Introduction to Sociology	3	0	3
*CDC	110	Introduction to Education of Young Children	2	2	3
†CDC		Child Care Elective	2-3	0-2	3
			13-14	0-4	15

Spring Semester

			Class	Lab	Credits
ENG		English or Literature Elective	3	0	3
PSY	211	Child Development	3	0	3
*CDC	120	Curriculum Development	2	2	3
		Humanities Elective	3	0	3
		‡Related Elective	3	0	3
			14	2	15

SECOND YEAR

Fall Semester

			Class	Lab	Credits
*CDC	170	Practicum I			3
†CDC		Child Care Elective	2-3	0-2	3
		Math/Science Elective	3-4	0-3	3-4
†CDC		Child Care Elective	2-3	0-2	3
		‡Related Elective	3	0	3
			10-13	0-7	15-16

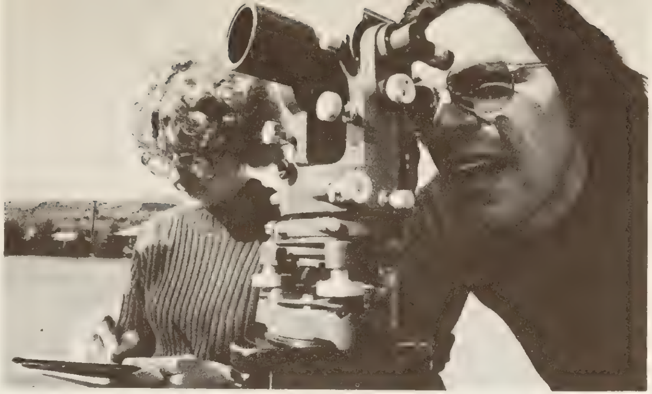
Spring Semester

			Class	Lab	Credits
*CDC	200	Social Psychology of Education	2	2	3
*CDC	290	Practicum II			6
†CDC		Child Care Elective	2-3	2-0	3
		Math/Science Elective	3-4	0-3	3-4
			7-9	0-7	15-16

***CDC COURSES ARE GIVEN MAINLY IN THE EVENING.**

†CDC electives may be taken from among CDC 115 Music for Young Children, CDC 140 Art for Young Children, CDC 150 Motor Development, CDC 160 Nutrition, CDC 180 Child Health and Safety, CDC 210 Special Problems in Children, CDC 220 Trends in Education of Young Children, CDC 230 Working with Parents in Nursery Programs, CDC 250 Language in Early Childhood, LIT 263 Children's Literature.

‡Related electives may be taken from among PSY 212 Adolescent Development, PSY 214 Abnormal Psychology, PSY 217 Counseling and Interviewing, PSY 227 Behavior Modification, SOC 210 Crime and Deviant Behavior, SOC 230 Marriage, Family and Divorce, SAC 101 The Individual in a Changing Environment, SAC 295 Seminar in Human Potential or from other disciplines.



Student measuring angles with a theodolite, while a classmate serves as party chief and recorder in a surveying class.

CIVIL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, Stephen G. Steele
Mechanical Building, Room 117
Telephone 772-5010

The Civil Engineering Technology curriculum at Broome Community College is designed to prepare graduates for technical positions in the civil engineering and construction industries. The primary objective of the program is to train engineering technicians who will work for civil engineers, heavy and building contractors, surveyors and architects. The construction industry, considering all related goods and services such as manufacturing and transportation, is the largest industry in the country.

Starting positions may be in drafting design, estimating, testing of materials, specification writing, construction inspection, surveying, field engineering, sales and insurance adjusting. Excellent opportunities exist for advancement and promotion. Starting salaries in June of 1980 average about $13,000 and ran as high as $15,600.

The Civil Engineering Technology Department offers two degrees: 1—the Associate in Applied Science degree in Civil Engineering Technology is offered during the day. This degree is accredited by the Accreditation Board for Engineering and Technology (ABET), formerly Engineers Council for Professional Development (ECPD). 2—The Associate in Applied Science degree in Industrial Technology, Civil Technology major, is offered in the evening.

Graduates of the program are eligible to become certified as Associate Engineering Technicians by the Institute for the Certification of Engineering Technicians.

It is expected that, nationwide, many new and exciting jobs will be created. The energy crisis has brought a great increase in activity to make this country self-sufficient. Billions of dollars will be spent on electric power generation and environmental pollution control.

In order for students to complete the curriculum in two years, the proper preparation is necessary. The minimum prerequisites are high school intermediate algebra, trigonometry and regents physics or their equivalents. For those wishing to enter the program without these prerequisites, Broome Community College offers the necessary preparatory courses. It would then usually take an additional semester or two to graduate. A special schedule will be worked out with the department chairman.

FIRST YEAR
Fall Semester

		Hours per Week		Credits per
		Class	Lab	Semester
CIV 111	Surveying I	2	6	4
CIV 115	Engineering Drawing I	1	3	2
CIV 110	Introduction to Technologies	1	0	½
ENG 110	Written Expression I	3	0	3
MAT141	College Algebra and Trigonometry	4	0	4
	*Social Science Elective	(3)	(0)	(3)
	or			
PHY 100	Preparatory Physics I	(4)	(0)	(4)
		14-15	9	16½-17½

Spring Semester

		Class	Lab	Credits
CIV 112	Surveying II	1	3	2
CIV 117	Architectural Drafting I	1	3	2
CIV 124	Mechanics	3	0	3
MAT142	Applied Calculus I	4	0	4
PHY 141	Physics	3	2	4
ENG 150	Technical Writing	3	0	3
		15	8	18

*Students entering the program without physics may elect to take PHY 100 Preparatory Physics I during the first semester in place of the Social Science elective, which may then be taken during the summer to complete the curriculum on schedule. Preparatory Physics is not applicable toward the degree.

SECOND YEAR
Fall Semester

		Class	Lab	Credits
CIV 215	Strength of Materials	4	0	4
CIV 217	Materials Testing	2	3	3
PHY 142	Physics	3	2	4
	Technical Electives (Choose 2)			
CIV 238	Architectural Design and Building Materials	2	3	3
CIV 235	Hydraulics	3	3	4
CST 122	Scientific Computer Programming—FORTRAN	2	2	3
MAT	Mathematics Elective	3	0	3
		13-15	7-11	17-18

Spring Semester

		Class	Lab	Credits
	Social Science Elective	3	0	3
	Technical Electives (Choose at least 13 credits)			
CIV 212	Route Surveying and Photogrammetry	3	3	4
CIV 224	Reinforced Concrete Design	2	3	3
CIV 226	Structural Steel Design	2	3	3
CIV 236	Construction Management	3	0	3
CIV 231	Estimating and Construction Planning	2	3	3
CIV 240	Soil Mechanics	2	3	3
CIV 244	Environmental Sanitation	3	0	3
MAT	Mathematics Elective	3	0	3
		13-15	6-15	16-18

GRADUATION REQUIREMENT: 67½ CREDITS

DEPARTMENT CHAIRPERSON, Mary Diegert
Titchener Hall, Room 221-F
Telephone 772-5022

The Computer Studies Department at Broome Community College offers four degree programs in the computer field—Computer Science, Data Processing, Data Processing—Technical, Industrial Technology with Computer Emphasis. The Computer Science program leads to the Associate in Science degree, while graduates of the other three receive the Associate in Applied Science degree.

THE COMPUTER SCIENCE PROGRAM prepares students for interesting and challenging careers in systems and applications programming, mathematics, systems analysis and operations research by providing the first two years of a four-year degree sequence. During the first semester the student is assigned an advisor and encouraged to investigate transfer colleges with a future career in mind, as career goals influence elective choices.

Programmers, for example, would study many different languages plus data structures and systems. Systems programmers would take, in addition, computer logic and microprocessors. A mathematics, systems analysis or operations research major would eliminate some language courses and substitute higher level math courses.

THE DATA PROCESSING PROGRAM is business oriented. It prepares students for entry level employment as business applications programmers and apprentice financial systems programmer/analysts. Courses studied include accounting and mathematics to learn problem analysis; computer language courses to design and code problem solutions; English, speech, report writing and social science courses to communicate the solutions to others.

THE DATA PROCESSING-TECHNICAL PROGRAM is oriented toward scientific programming with some emphasis on hardware design and function. It prepares students for entry level employment as scientific applications programmers and in the emerging field of micro-computer hardware/software design. Courses studied include mathematics and logic to learn problem analysis; high level and assembly languages to design and code solutions; English, speech and technical writing courses to communicate solutions to others.

INDUSTRIAL TECHNOLOGY WITH COMPUTER EMPHASIS is intended primarily for part-time students attending classes in the evening. Information on this program appears on page 62.

In every Computer Studies program the student must learn to write well documented, easy to read, structured programs. The required structured programming language Pascal leads toward that goal.

The following excerpt from a publication of the Better Business Bureau ("Facts on Computer Careers," 1977) should be helpful to those considering careers in the field:

"For all its dynamic growth, the computer field is still in its infancy. Opportunities for advancement are limited primarily by the individual's skills, educational background, ability to communicate, and personal drive. However, genuine aptitude and desire are critical.

"In addition to adequate training, most jobs in the computer field require certain personal traits which are of prime importance. Foremost is the ability to think logically. Also important are the ability to systematically organize, analyze and handle data and information; close attention to detail and accuracy; and the ability to use imagination in devising new solutions to existing problems."

COMPUTER SCIENCE
(Associate in Science Degree)

FIRST YEAR
Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
CST 111	Introduction to Computer Studies	3	0	3
CST 115	Problem Solving with Pascal	2	2	3
	English or Literature Elective	3	0	3
MAT 163	Calculus with Analytic Geometry I	4	0	4
	Social Science Elective	3	0	3
PED	Physical Education Elective	0	2	1
		15	4	17

Spring Semester

		Class	Lab	Credits
	English or Literature Elective	3	0	3
MAT 164	Calculus with Analytic Geometry II	4	0	4
PHI 202	Logic	3	0	3
	*MAT or CST Elective	2-4	0-2	3-4
	Social Science Elective	3	0	3
PED	Physical Education Elective	0	2	1
		15-17	2-4	17-18

SECOND YEAR
Fall Semester

		Class	Lab	Credits
HIS	History Elective	3	0	3
	*MAT or CST Elective	2-4	0-2	3-4
	*MAT or CST Elective	2-4	0-2	3-4
	Laboratory Science Sequence	3	3	4
	**Approved Elective	2-4	0-3	3-4
		12-18	3-10	16-19

Spring Semester

		Class	Lab	Credits
MAT 252	Mathematical Modeling with the Computer	4	0	4
MAT 264	Linear Algebra	4	0	4
	Laboratory Science Sequence	3	3	4
	**Approved Elective	2-4	0-3	3-4
		13-15	3-6	15-16

*MAT 114 Statistics, MAT 153 and 154 Discrete Math I and II, MAT 243 Differential Equations, MAT 263 Calculus III, MAT 266 Introduction to Higher Math. Any CST course except CST 110.

**Chosen with career goal and transfer institution in mind and approved by Department Chairperson.

GRADUATION REQUIREMENT: 65 CREDITS

DATA PROCESSING
(Associate in Applied Science Degree)

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BUS	100	Accounting I	4	0	4
BUS MAT	115 114	Business Statistics or Statistics	3	0	3
CST	111	Introduction to Computer Studies	3	0	3
CST	115	Problem Solving with Pascal	2	2	3
ENG	110	Written Expression I	3	0	3
			15	2	16

Spring Semester

			Class	Lab	Credits per Semester
BUS	101	Accounting II	4	0	4
CST	100	BASIC - (½ semester)	1	2	1
CST	118	Computer Programming—COBOL	2	2	3
ENG	120	Written Expression II	3	0	3
MAT	121	Finite Mathematics	3	0	3
SPK SPK	100 102	Basic Speaking or Effective Speaking	2-3	0	2-3
			15-16	4	16-17

SECOND YEAR
Fall Semester

			Class	Lab	Credits per Semester
BUS	157	Business Report Writing	3	0	3
CST	116	RPG II	2	2	3
CST	218	Advanced COBOL	2	2	3
PHS	111	Physical Science for Today	2	2	3
		Social Science Elective	3	0	3
			12	6	15

Spring Semester

			Class	Lab	Credits per Semester
BUS	270	Decision Making	3	0	3
CST CST	120 122	Computer Programming—FORTRAN or Scientific Computer Programming—FORTRAN	2	2	3
CST	200	Systems Analysis	2	2	3
CST	217	Advanced RPG II	2	2	3
		Social Science Elective	3	0	3
			12	6	15

GRADUATION REQUIREMENT: 62 CREDITS

DATA PROCESSING—TECHNICAL
(Associate in Applied Science Degree)

FIRST YEAR
Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CST	111	Introduction to Computer Studies	3	0	3
CST	115	Problem Solving with Pascal	2	2	3
ENG	110	Written Expression I	3	0	3
MAT	114	Statistics	3	0	3
		Laboratory Science Sequence	3	2-3	4
			14	4-5	16

Spring Semester

			Class	Lab	Credits per Semester
CST	122	Scientific Computer Programming—FORTRAN	2	2	3
ENG	150	Technical Writing	3	0	3
PHI	202	Logic	3	0	3
MAT	153	Discrete Mathematics I	4	0	4
		Laboratory Science Sequence	3	2-3	4
			15	4-5	17

SECOND YEAR
Fall Semester

			Class	Lab	Credits per Semester
CST	112	Computer Logic	2	2	3
CST	126	Assembly Programming—BAL	2	2	3
CST	205	Advanced FORTRAN with Graphics	2	2	3
MAT	154	Discrete Mathematics II	4	0	4
		Social Science Elective	3	0	3
			13	6	16

Spring Semester

			Class	Lab	Credits per Semester
CST	202	Data Structures	2	2	3
CST	220	Introduction to Microprocessors	2	2	3
CST	222	Topics in Computer Systems	3	0	3
SPK	102	Effective Speaking	3	0	3
		Social Science Elective	3	0	3
			13	4	15

GRADUATION REQUIREMENT: 64 CREDITS

DENTAL HYGIENE

The Dental Hygiene curriculum is designed to prepare students for the contemporary practice of dental hygiene. The curriculum emphasizes the fundamental knowledge necessary for practice in a private dental office or similar clinical setting under the supervision of a dentist.

The dental hygienist performs various preventive services, such as dental prophylaxis, topical fluoride applications, dental radiographs and instruction in plaque control procedures. Successful completion of the curriculum permits one to take the required written and practical licensure examinations.

Dental Hygiene graduates averaged $10,607 as starting salaries in 1980, encompassing a range from $11,500 to $8,000.

Students must purchase instruments and uniforms which range from $350-$400 and pay license examination fees which range from $150-$200 in addition to textbooks.

Upon admission into the program all dental hygiene freshmen will be cognitively mapped to determine learning styles.

Students who wish to pursue a career as a dental hygienist in public health, health management, health education or dental hygiene education are encouraged to transfer to a baccalaureate program after graduation.

The curriculum is accredited by the Council on Dental Education of the American Dental Association.

Dental Hygiene student examines radiographs in the College's Radiology Clinic while the patient looks on.

DEPARTMENT CHAIRMAN, Dr. Frederick Johnson
Science Building, Room 108
Telephone 772-5149

FIRST YEAR

Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
DEN	101	Dental Hygiene I	2	6	4
DEN	103	Oral Anatomy and Physiology	2	4	4
ENG	110	Written Expression I	3	0	3
			10	12	15

Spring Semester

BIO	132	Human Biology II	3	2	4
DEN	102	Dental Hygiene II	4	8	6
DEN	106	Clinical Dental Radiography	1	2	2
BIO	160	Microbiology	2	3	3
SPK	102	Effective Speaking	3	0	3
			13	15	18

SECOND YEAR

Fall Semester

DEN	201	Dental Hygiene III	2	12	5
DEN	204	General and Oral Pathology	3	0	3
DEN	205	Periodontology	2	0	2
DEN	209	Nutrition	3	0	3
DEN	213	Public Health	3	1	3
PSY	110	General Psychology	3	0	3
			16	13	19

Spring Semester

DEN	202	Dental Hygiene IV	2	12	5
DEN	206	Dental Pharmacology	2	0	2
DEN	210	Dental Materials	2	2	3
DEN	214	Dental Specialties	2	0	2
SOC	110	Introduction to Sociology	3	0	3
			11	14	15

NOTE: The Dental Hygiene Department recommends that dental hygiene students wear safety glasses during pre-clinical and clinical procedures, especially the individual wearing contact lenses. . . . Students must have completed a course in CPR (Cardio-Pulmonary Resuscitation) prior to treating patients in the Spring Semester of the Freshman Year.

Professor oversees Electrical Engineering Technology students who are using the new microprocessor development system in the College's Microcomputer Laboratory.

The Electrical Engineering Technology program at Broome Community College is made up of a planned sequence of college level courses leading to the associate degree, and it is designed to prepare men and women to work in the field of engineering technology. Engineering technology is concerned primarily with the application of established scientific and engineering knowledge and methods.

The graduate of the electrical program is an engineering technician who is trained to be the interface between the graduate engineer and the skilled craftsman. He/she may function in one or a combination of the following ways:

The technician translates problems into functioning equipment, using his knowledge in mathematics, physics, linear and digital electronics, machines, process control, circuit analysis, and computer programming languages. He/she does this whether working in a small company as the only technician or in a large company as part of a team.

The technician works for companies like New York State Electric and Gas, International Business Machines, Xerox, Eastman Kodak, General Electric, General Aniline and Film, Universal Instruments, Raymond Corporation, National Cash Register, Bell Labs and Corning Glass.

Starting positions include engineering assistant, computer technician, electronics technician or laboratory, field service, test technician, or technical sales representative. Starting salaries for graduates are ranging between $17,500 and $12,000.

Many technicians find that more education is desirable. While their basic education is not transfer-oriented, graduates of Broome Community College have successfully completed advanced study at State University of New York colleges at Binghamton, Utica-Rome, and Buffalo, at Rochester Institute of Technology, Clarkson College of Technology and others.

The program is fully accredited by the Accreditation Board for Engineering and Technology (ABET), which was formerly the Engineers Council for Professional Development (ECPD).

ELECTRICAL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, Robert Reid
Electrical Building, Room 101
Telephone 772-5017

FIRST YEAR

Fall Semester

		Hours per Week Class	Lab	Credits per Semester
CST 122	Scientific Computer Programming—FORTRAN	2	2	3
EET 111	Electrical Construction Laboratory I	1	3	2
EET 121	Electrical Circuits	4	3	5
EGR 110	Introduction to Technologies	1	0	½
ENG 110	Written Expression I	3	0	3
MAT 141	College Algebra and Trigonometry	4	0	4
		15	8	17½

Spring Semester

		Class	Lab	Credits
EET 112	Electrical Construction Laboratory II	0	3	1
EET 130	Engineering Drawing	0	3	1
EET 150	Electronics I	4	3	5
EET 162	Computer Aided Network Analysis	3	0	3
ENG 150	Technical Writing	3	0	3
MAT 142	Applied Calculus I	4	0	4
		14	9	17

SECOND YEAR

Fall Semester

		Class	Lab	Credits
EET 241	Electrical Machines and Controls I	3	3	4
EET 251	Electronics II	3	3	4
PHY 141	Physics	3	2	4
EET 267	Digital Electronics and Microprocessors	3	2	4
	Social Science Elective	3	0	3
		15	10	19

Spring Semester

		Class	Lab	Credits
EET 230	Electronic Design and Fabrication	0	3	1
EET 242	Electrical Machines and Controls II	4	3	5
EET 252	Electronics III	3	3	4
PHY 144	Physics II-E	3	2	4
	Social Science Elective	3	0	3
		13	11	17

GRADUATION REQUIREMENT: 70½ CREDITS

FIRST YEAR

Fall Semester

Course	Title	Hours per Week Class	Hours per Week Lab	Credits per Semester
CHM 145	Chemistry	3	3	4
MAT 171	Engineering Calculus with Analytic Geometry I	4	0	4
MET 115	Graphics	1	2	2
PHY 181	Engineering Physics I	3	2	4
	English or Literature Elective	3	0	3
		14	7	17

Spring Semester

Course	Title	Hours per Week Class	Hours per Week Lab	Credits per Semester
CHM 146	Chemistry	3	3	4
CST 124	Computer Programming for Engineers	2	2	3
MAT 172	Engineering Calculus with Analytic Geometry II	4	0	4
PHY 182	Engineering Physics II	3	2	4
	English or Literature Elective	3	0	3
		15	7	18

SECOND YEAR

Fall Semester

Course	Title	Hours per Week Class	Hours per Week Lab	Credits per Semester
*EGR 281	Mechanics: Statics	3	0	3
EGR 285	Electrical and Electronic Circuits	3	0	3
EGR 287	Engineering Science Laboratory I	0	3	1
MAT 271	Engineering Calculus with Analytic Geometry III	4	0	4
PHY 281	Engineering Physics III	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		16	5	18

Spring Semester

Course	Title	Hours per Week Class	Hours per Week Lab	Credits per Semester
*EGR 282	Mechanics: Dynamics	3	0	3
EGR 286	Engineering Analysis	1	0	1
EGR 288	Engineering Science Laboratory II	0	3	1
MAT 272	Differential Equations with Linear Algebra	4	0	4
PHY 282	Engineering Physics IV	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		14	5	16

*Organic Chemistry (CHM 261 and 262) may be substituted by students who are declared Chemical Engineering majors

GRADUATION REQUIREMENT: 69 CREDITS

DEPARTMENT CHAIRMAN, Jack Foster
Titchener Hall, Room 221
Telephone 772-5114

The Engineering Science curriculum is designed primarily to prepare graduates to continue their studies in the various engineering disciplines at four-year colleges and universities. The strong emphasis on mathematics and physics also allows graduates to transfer to these majors at four-year institutions, with junior-year standing. In addition, there are immediate employment possibilities for qualified graduates who wish to terminate or postpone further educational goals until a more opportune time.

Broome Community College is a member of the New York State Two-Year/Four-Year Engineering College Curriculum Study Committee. The purpose of this organization is to facilitate the transfer to four-year colleges, with junior-year standing, of two-year college graduates from engineering science programs. Rensselaer Polytechnic Institute (RPI), Clarkson, Rochester Institute of Technology (RIT), Cornell, Syracuse, Union, and State University of New York at Buffalo and at Stony Brook are among the members of the Study Committee who have agreed to accept those two-year college graduates who have been recommended by their Engineering Science departments. Feedback from these and other institutions to which Broome Community College students transfer indicates a high regard for the graduates and the quality of the Engineering Science program at BCC.

Those graduates who prefer to seek immediate employment will find job opportunities as engineering technicians or as assistants to engineers involved in research and development. In addition, employment opportunities also exist which involve the application of mathematics and computer programming.

Students entering Broome Community College who wish to continue studying for their bachelor's degrees in engineering, applied mathematics, or physics will find the Engineering Science program the most appropriate course of study. As a reasonable guideline for successful achievement in this rigorous program, a student's course work in high school should be above the 80% level in all areas. (See page 6 for specific requirements).

Engineering Science students measuring the deflection of an electron beam in a magnetic field during an E/M experiment in an Engineering Physics Laboratory.

INDIVIDUAL STUDIES

DEPARTMENT CHAIRMAN, Francis J. Short
Department of Special Career Programs
Mechanical Building, Room 219
Telephone 772-5087

To better meet the changing times and to provide an opportunity for students with unusual needs, Broome Community College allows **selected students** the opportunity to take a personally planned degree program. This program requires that the student develop, with an advisor, an ''area of concentration.'' **This area of concentration must be a cohesive body of knowledge which the student can justify as having both educational and personal relevance.**

Completion of the Individual Studies Program can lead to an Associate in Science (AS) or Associate in Applied Science (AAS) degree, depending on the student's area of concentration. The AS degree program is designed for maximum transfer possibilities, and the AAS degree program has better immediate employment opportunities. **Admission into the program requires development of a Plan of Studies which is approved by the department chairman. This plan is developed by the student with a specific educational or career goal in mind.**

Associate in Science Degree
(60 credits)

- 30 Credits in English, Humanities, Natural Sciences, Mathematics and Social Sciences.
- 30 Credits in student's Area of Concentration

Associate in Applied Science Degree
(60 credits)

- Minimum of 20 semester credits in Liberal Arts and Sciences to include:
  6 Credits in Humanities (maximum of 3 hours in Speech)
  6 Credits in Social Science
  8 Credits in Natural and Physical Science, including Mathematics
- 10 Credits of Technical Electives
- 30 Credits in student's Area of Concentration

For additional information contact the Department Chairman.

LIBERAL ARTS AND SCIENCES

DIVISION DEAN, George Higginbottom
Titchener Hall, Room 121
Telephone 772-5031

The Liberal Arts curriculum is mainly a two-year university-parallel program designed especially for those who wish to continue their college education at a four-year school. Graduates of the College in its Liberal Arts program receive either the Associate in Arts or Associate in Science degrees, depending on which course of study they complete.

Students completing this curriculum, its science option or its other emphases will have a breadth of education that prepares them for many professional careers. The Science Option, for example, is excellent for those planning careers in forestry, chemistry, biology or other scientific areas. Those aspiring to become teachers, doctors, dentists, lawyers, pharmacists or law-enforcement officers will find alternatives in the Liberal Arts curriculum designed especially for them.

Students should be aware that many of these alternative curriculums presume a high level of preparation in the secondary school, and they should consult with faculty advisors or counselors when there is doubt about the adequacy of their pre-college academic background.

To qualify for any degree at Broome Community College, students must present a cumulative grade point average of 2.0 or above.

Career Preparation

For a great number of careers a rich background in liberal studies, as is presented in the Associate in Arts (AA) and Associate in Science (AS) degree programs, is essential. Students are urged to utilize the college resources thoroughly, and as early as possible, in locating useful information about their intended academic majors and their career aspirations.

The Liberal Arts advisement system is one which aims to match students with advisors who share their interests. If questions pertaining to career preparation, transfer opportunities and job placement cannot be answered by the faculty advisors, students will be directed to somebody who can. Key figures in the advisement picture are:

Academic Advisor
Counselor
Placement Officer

To start students thinking about a career and the preparation needed, a number of fields which suggest a Liberal Arts beginning is listed below. The college does not offer courses in all these areas, and in some cases the professional courses are taught at the junior/senior level in baccalaureate programs.

Advertising
Architecture
Art
Child Care
Communications
Community/Human Service
Computing
Counseling
Criminal Justice
Data Processing
Design
Energy Research
Environmental Affairs
Foreign Service
Government Service
Home Economics
Interior Design
International Business
Labor Relations
Library Science
Management
Medicine
Oceanography
Optometry
Personnel
Public Relations
Public Service
Publishing
Real Estate
Recreation
Social Work
Scientific Research
Sports Writing
Teaching
Technical Writing
Translating
Transportation
Travel/Tourism
Urban Planning

Communication With Students

The division maintains Bulletin Boards in the Titchener Hall lobby and outside the office in Titchener Hall, Room 121. Students are urged to check the boards regularly for information pertaining to academic advisement, career planning, cultural events, transfer opportunities, convocations and lectures, concerts, and the like. Important notices and messages for students will also be posted. **Check the boards!**

Academic Advisement

FULL-TIME STUDENTS

Every full-time student is assigned a faculty advisor. During the first few weeks of classes, students should meet with their advisors to discuss academic and career plans.

Students are *encouraged* to meet regularly with their advisors thereafter. All students are required to complete in the presence of their advisors a Degree Advisement Contract prior to registering in subsequent semesters.

The Liberal Arts office staff is available to deal with special problems relating to academic requirements and transfer. While the faculty and staff will make every reasonable effort to help students with academic planning, students must also assume responsibility for their programs and, particularly, in meeting degree requirements.

PART-TIME STUDENTS

Part-time day students who intend to matriculate in a degree program sponsored by the Liberal Arts Division should come to the office (Room 121 in Titchener Hall) to be assigned academic advisors. Students not interested in a degree, but, nevertheless, seeking academic advice, may do so in the Liberal Arts office. Part-time evening students will be advised by representatives from the Office of Continuing Education.

Transfer

Students who have earned A.A. or A.S. degrees at Broome Community College and who intend to go on for baccalaureate degrees are guaranteed transfer to a four-year college or university of the State University of New York (SUNY). There is no guarantee, however, that students can complete all degree programs at transfer institutions in four semesters.

Students are urged to learn as much as they can relative to program requirements at the institution(s) to which they might transfer. For example, many four-year schools require foreign language. The decision to take a language at Broome Community College might thus be influenced by whether or not it is required at the college to which one intends to transfer.

The Liberal Arts Division is in the process of establishing guaranteed transfer arrangements with other public and private colleges. Inquiries about these agreements, some in force and some in progress, should be made in Titchener Hall, Room 121.

Honors

An Honors option for Associate in Arts degree (AA) students is available to selected freshmen. Associate in Science degree (AS) students who qualify can enroll in Honors seminars with permission of the Advisory Committee. Information is available in Room T-121.

Associate In Arts Degree

	Credits Required Per Year
English ENG 110 and 120 Written Expression I and II	6
History HIS 100 Rise of the West plus one other history (HIS) course.	6
Mathematics or elective (as advised) Students who have completed fewer than 3 units of secondary school mathematics (through Intermediate Algebra) are required to take a minimum of 2 semesters of college level mathematics. Students who have completed 3 units of secondary school mathematics (through Intermediate Algebra) are required to take one semester of college level mathematics. . . . Students who have completed more than 3 units of secondary school mathematics (including Intermediate Algebra) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.	0-8
Laboratory Science A full-year *sequence* of biology, chemistry, physics or physical science. Acceptable sequences: BIO 111-112 General Biology I and II; BIO 131-132 Human Biology I and II; CHM 141-142 General Chemistry; CHM 145-146 Chemistry; PHY 161-162 Physics; PHS 113, 115, or 116 Physical Science (any 2).	8
Philosophy or Foreign Language Sequence Students are encouraged to take both, but they must complete a year (6-8 credits) of philosophy or a foreign language.	6-8
Physical Education No more than 2 credits can be used to fulfill degree requirements.	2
Literature Any 2 LIT. courses.	6
Social Science Any 2 courses from the following disciplines—anthropology, economics, geography, political science, psychology, sociology, social sciences. These have ANT, ECO. GEO, POS, PSY, SOC, SOS designators.	6
Electives A maximum of 16 credits may be taken outside the offerings of the Liberal Arts and Sciences division with the approval of the Dean of the LA Division.	14-24
Total number of credits	64 minimum

MODEL PROGRAMS
(All Earn Associate In Arts Degree)

These models are suggested sequences of study for students who have decided on the major or field indicated. The arrangement of courses and specific recommendations are based on:

1 – a variety of similar programs at four-year colleges to which many BCC students transfer.
2 – immediately acquainting the students with their chosen field.
3 – completing prerequisites for later courses.
4 – fulfilling the common Associate in Arts degree requirements.

THESE MODELS ARE GUIDES AND SHOULD NOT BE REGARDED AS INFLEXIBLE.

The models are displayed in two-year arrangements. However, many students may be more successful if they plan a 2½ or 3-year program of study. For example, Art, the first model displayed, is also presented in a possible 3-year arrangement.

ART

FIRST YEAR
Courses (Credits)
- Written Expression I & II (6)
- History 100 (3)
- Any Mathematics (0-8)
- Philosophy or Foreign Language Sequence (6-8)
  - *Humanities: PHI 111, 112, (6)
- Any Physical Education (2)
- Electives
  - †Intro. to Art (3)
  - †Studio Courses (6)

SECOND YEAR
Courses (Credits)
- Any History (3)
- Lab Science Sequence (8)
  - †Human Biology
- Any Literature (6)
- Any Social Science (6)
- Electives
  - †additional art, studio, and/or design courses

This three-year model is for example purposes only:

ART – Three Year Program

FIRST YEAR
Courses (Credits)
- Basic Language Skills (3)
- Written Expression I (3)
- College Reading: RDG (1-3)
- Learning Skills Sequences LRS (2)
- Individual in a Changing Environment: SAC 101 (3)
- Intro. to Art (3)
- Studio Art-Drawing (3)
- Physical Education (2)

SECOND YEAR
Courses (Credits)
- Basic Math Review
- Humanities (6)
- Social Science (6)
- Studio Art-Painting I & II (6)
- Lab Science Sequence (8)

THIRD YEAR
Courses (Credits)
- Mathematics (8)
- Literature (6)
- History (6)
- Electives

BUSINESS
(For Transfer to SUNY Binghamton)

FIRST YEAR
Courses (Credits)
- Written Expression I & II (6)
- History 100 & any other HIS Course (6)
- Mathematics (0-8)
  - *MAT 114, 122 or 163
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Physical Education (2)
- Electives (8)
  - *Accounting I & II

SECOND YEAR
Courses (Credits)
- Any Lab Science Sequence (8)
- Any Literature (6)
- Social Science (6)
  - *ECO 110, 111
- Electives
  - †BUS 118 Business Law
  - †BUS 245 Management A Behavioral Approach
  - †CST 110 Intro. to Data Processing
  - †BUS 249 Principles of Personnel Management
  - †CST Computer Language Course
  - †CST 118 or 120

INTERIOR DESIGN

FIRST YEAR
Courses (Credits)
- Written Expression I & II (6)
- HIS 100 & any other HIS course (6)
- Mathematics (0-8)
  - †Math, A Liberal Art
- Philosophy or Foreign Language Sequence (6-8)
  - †PHI 111, 112
- Electives (6)
  - *Intro. to Design
  - *History of Architecture
- Physical Education (2)

SECOND YEAR
Courses (Credits)
- Any Lab Science Sequence (8)
- Any Literature (6)
- Social Science (6)
  - †General Psychology
- Electives (12)
  - *additional design courses
  - *art courses
  - *CIV 159 Architectural Drafting

CHILD CARE

FIRST YEAR
Courses (Credits)
- Written Expression I & II (6)
- Any Mathematics (0-8)
- Lab Science Sequence (8)
  - *Human Biology
- Any Physical Education (2)
- Social Science (6)
  - *General Psychology
  - *Intro. to Sociology
- Electives: (6)
  - *Intro. to Education of Young Children – prerequisite to other Child Care (CDC) courses – & an additional CDC course

SECOND YEAR
Courses (Credits)
- History 100 & any other HIS course (6)
- Any Philosophy or Foreign Language Sequence (6-8)
- Literature (6)
  - *Children's Literature
- Electives
  - †additional CDC courses
  - †additional psychology & sociology courses
  - †Children's Theater
  - †Creative Dramatics

CRIMINAL JUSTICE

FIRST YEAR
Courses (Credits)
- Written Expression I & II (6)
- History 100 and any other HIS course (6)
- Mathematics (0-8)
  - †MAT 117 or 121 followed by MAT 114 Statistics
- Social Science (6)
  - *General Psychology
  - *Intro. to Sociology
- Electives (6)
  - †CRJ 100 Survey of Law Enforcement & one other CRJ course
- Any Physical Education (2)

SECOND YEAR
Courses (Credits)
- Lab Science Sequence (8)
  - *CHM 141 or 145 followed by CHM 149
- Any Philosophy or Foreign Language Sequence (6-8)
- Literature (6)
  - †Prison Literature
- Electives
  - †3 CRJ courses
  - †social science courses

FOREST MANAGEMENT

FIRST YEAR
Courses (Credits)
- Written Expression I & II (6)
- History 100 & any other HIS course (6)
- Mathematics (0-8)
  - *MAT 163, 164
- Lab Science Sequence (8)
  - *BIO 111, 112
- Any Physical Education (2)
- Electives (8)
  - *CHM 145, 146 Chemistry

SECOND YEAR
Courses (Credits)
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Literature (6)
- Social Science (6)
  - *ECO 110, 111
- Lab Science Sequence (8) PHY 161, 162 Physics
- Electives
  - †General Psychology or Intro. to Sociology
  - †Physical Science – Environment
  - †Effective Speaking
  - †American Political System
  - †State and Local Government

*THESE COURSES ARE "STRONGLY RECOMMENDED" FOR THE PROGRAMS INDICATED
†THESE COURSES ARE "RECOMMENDED" FOR THE PROGRAMS INDICATED

MODEL PROGRAMS

PRINT JOURNALISM

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 & any other HIS course (6)
- Any Mathematics (0-8)
- Any Lab Science Sequence (8)
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Physical Education (2)
- Journalism (6)

SECOND YEAR
Courses (Credits)

- Any Literature (6)
- Social Science (6)
  - †Consumer Economics
  - †Micro & Macro Economics
- Electives
  - †additional writing courses
  - †additional social science courses
  - †Media & Culture
  - †Effective Speaking

LANDSCAPE ARCHITECTURE

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 & another HIS course (6)
  - †HIS 131
- Mathematics (0-8)
  - †MAT 139, 140
- Lab Science Sequence (8)
  - *BIO 111, 112
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Physical Education (2)

SECOND YEAR
Courses (Credits)

- Any Literature (6)
- Any Social Science (6) (excluding SOS courses)
- Electives
  - *MET 115 Graphics
  - *CIV 111 Surveying 1
  - *CST 110 Intro. to Data Processing
  - *ART 115 Studio Art-Drawing
  - *PHS 116 Physical Science - Environment
  - *PHY 161, or 117 Physics

PHYSICAL EDUCATION

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 and any other HIS course (6)
- Any Mathematics (0-8)
- Lab Science Sequence (8)
  - *Human Biology
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Physical Education (2)

SECOND YEAR
Courses (Credits)

- Any Literature (6)
- Social Science (6)
  - *General Psychology
- Electives
  - †General Biology
  - †Effective Speaking
- Students are encouraged to become involved in additional physical education activities

PHYSICAL THERAPY

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- Mathematics (0-8)
  - †at least to Trigonometry, preferably to Calculus
- Lab Science Sequence (8)
  - *General Biology
- Any Physical Education (2)
- Social Science (3)
  - *General Psychology
- Electives (8)
  - *CHM 145, 146 Chemistry

SECOND YEAR
Courses (Credits)

- History 100 & any other HIS course (6)
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Literature (6)
- Social Science (3)
  - *a psychology course
- Physics
  - *PHY 161, 162
- Electives
  - *Intro. to Sociology
  - *additional psychology

MUSIC

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 & any other HIS course (6)
- Any Mathematics (0-8)
- Philosophy or Foreign Language Sequence (6-8)
  - †PHI 111, 112 or Italian
- Any Physical Education (2)
- Electives (6)
  - †Intro. to Music Theory

SECOND YEAR
Courses (Credits)

- Any Lab Science Sequence (8)
- Any Literature (6)
- Any Social Science (6)
- Electives
  - †additional music courses

RECREATION LEADERSHIP

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 and any other HIS course (6)
- Any Mathematics (0-8)
- Lab Science Sequence (8)
  - *Human Biology
- Philosophy or Foreign Language Sequence (6-8)
  - †foreign language
- Any Physical Education (2)

SECOND YEAR
Courses (Credits)

- Any Literature (6)
- Social Science (6)
  - *General Psychology
  - *Adolescent or Child Psychology
- Electives
  - †additional psychology courses
  - †art, music, theater, speech, fine arts courses

PRE-LAW

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 & any other HIS course (6)
- Mathematics (0-8)
  - †highest level course for which student qualifies
- Any Lab Science Sequence (8)
- Philosophy or Foreign Language Sequence (6-8)
  - *foreign language sequence
- Any Physical Education (2)

SECOND YEAR
Courses (Credits)

- Any Literature (6)
- Social Science (6)
  - †ECO 110, 111
- Electives
  - †Political Science POS 201, 204
  - †Economics ECO 130
  - †Philosophy PHI 202
  - †advanced foreign language course

SPECIAL EDUCATION

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 (3)
- Any Mathematics (0-8)
- Lab Science Sequence (8)
  - *Human Biology
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Physical Education (2)
- Social Science (3)
  - *General Psychology

SECOND YEAR
Courses (Credits)

- Any History (3)
- Any Literature (6)
- Social Science
  - *psychology
- Electives
  - †Effective Speaking
  - †Fine Arts
  - †General Biology
  - †additional psychology

THEATER

FIRST YEAR
Courses (Credits)

- Written Expression I & II (6)
- History 100 & any other HIS course (6)
- Any Mathematics (0-8)
- Any Philosophy or Foreign Language Sequence (6-8)
- Any Physical Education (2)
- Electives (6)
  - *Intro. to Theater
  - *An Acting course

SECOND YEAR
Courses (Credits)

- Any Lab Science Sequence (8)
- Literature (6)
  - †World Drama
  - †American Drama
- Social Science (6)
  - †Psychology
- Electives
  - †additional theater courses

*THESE COURSES ARE "STRONGLY RECOMMENDED" FOR THE PROGRAMS INDICATED
†THESE COURSES ARE "RECOMMENDED" FOR THE PROGRAMS INDICATED

Associate In Science Degree

Science Option

This program is designed for students planning careers in forestry, chemistry, biology, medicine and related fields.

FIRST YEAR

	Credits Required Per Year
English ENG 110 and ENG 120 Written Expression I and II	6
History HIS 100 The Rise of the West and any other history (HIS) course	6
Mathematics MAT 163 and MAT 164 Calculus with Analytic Geometry I and II or if a student is not prepared for these courses, he or she may take MAT 139 Algebra or MAT 140 Trigonometry or MAT 161 Pre-Calculus Mathematics first.	8
2 Laboratory Science Sequences BIO 111 and BIO 112 General Biology I and II and CHM 145 and CHM 146 Chemistry for those planning careers in medicine, veterinary medicine, dentistry, forest biology, marine biology, pharmacy or forest chemistry.	16
Physical Education Any 2 PED courses.	2
SECOND YEAR	
Literature Any 2 LIT courses	6
Social Science Any 2 courses from the following disciplines—anthropology, economics, geography, political science, psychology, sociology, social science. These have ANT, ECO, GEO, POS, PSY, SOC and SOS designators.	6
2 Laboratory Science sequences PHY 161 and 162 Physics and CHM 245 and 246 Organic Chemistry for those planning careers in medicine, veterinary medicine, dentistry, forest biology, marine biology, pharmacy or forest chemistry.	16
Mathematics, Philosophy or Foreign Language A student must fulfill the mathematics requirement before he or she can take a philosophy or foreign language course. If a student did not complete MAT 164 Calculus with Analytic Geometry as a freshman, but instead took the other Mathematics courses listed above, then MAT 163 and MAT 164 should be taken now. If the student wishes to take a math course more advanced than MAT 164 and he or she has completed MAT 164, then he or she may take another mathematics course now. If the math requirement has been completed and the student does not elect to take additional mathematics, then he or she is required to take any philosophy or foreign language courses.	6
Total number of credits	72 minimum

Mental Health & Retardation Emphasis

This course of study is for students who wish to transfer to upper division degree programs in mental health and human services, and for those seeking entry level preparation for positions in appropriate public and private agencies. Broad preparation during the first year is followed by greater concentration during the second year.

The number of students permitted to enter the second year of the program is limited by the availability of field placement openings in local agencies. Selection will take place during the spring semester of the Freshman year. Students who do not qualify can still complete A.A. degree requirements within the normal two-year period. For further details inquire at the Liberal Arts Division office in Titchener Hall.

		FIRST YEAR Fall Semester	**Credits**
ENG	110	Written Expression I	3
MAT		(Mat 124 Statistics Recommended)	3-4
HIS	100	Rise of the West	3
		Laboratory Science (BIO 131 Human Biology I recommended)	4
PSY	110	General Psychology	3
PED		Physical Education Elective	1
			17-18
		Spring Semester	
ENG	120	Written Expression II	3
SOC	110	Introduction to Sociology	3
PHI	206	Social/Political Philosophy	3
		Laboratory Science (BIO 132 Human Biology II recommended)	4
		☐Liberal Arts Elective	3
PED		Physical Education Elective	1
			17

		SECOND YEAR Fall Semester	**Credits**
PSY	223	Intelligence and the Mentally Retarded	3
PSY	217	Counseling and Interviewing	3
		English or Humanities Elective	3
SOS	288	Seminar in Community Social Service Organizations	3
		☐Liberal Arts Elective	3
			15
		Spring Semester	
PSY	227	Behavior Modification	3
PSY	214	Abnormal Psychology	3
		☐Any 2 Liberal Arts Electives	6
SOS	290	Social Science Field Work*	3
			15

*This internship experience generally involves 6 hours a week in one of the following agencies—Binghamton Psychiatric Center, Broome Developmental Center, Association for Retarded Children, Broome County Social Services, Broome County Juvenile Aid Bureau, Broome County Office for the Aging, Binghamton Outreach Program, PROBE, American Red Cross, Planned Parenthood, Wilson Memorial Hospital Extended Care.

☐Students receiving credit for SOS 150 Introduction to Human Service Work may use those credits for 6 of the 12 required in the program from Liberal Arts electives.

MECHANICAL ENGINEERING TECHNOLOGY

DEPARTMENT CHAIRMAN, Herbert Durst
Mechanical Building, Room 117
Telephone 772-5023

The continuing thrust for faster and more economical manufacturing methods, more reliable systems and the need for new, clean and consistent sources of energy has generated an increased demand for mechanical engineering technicians with a high degree of technical competence.

The curriculum outline of courses encompasses a blend of mathematics, science, English, social science and technical specialties conceived to generate the necessary background for a variety of entry positions in Mechanical Engineering Technology. These entry positions usually align closely with and support mechanical engineering or related functions.

Recent graduates have been employed in areas of design-drafting, product design, quality control, metallurgy, heat-power, purchasing, sales, technical writing and system maintenance. Job opportunities exist both locally and nationally, and starting salaries for 1980 graduates ranged between $12,600 and $15,200.

Recruitment of graduates for employment by companies large and small is active year-round. Mechanical Engineering Technology is a particularly lucrative field for the female. Although few have ventured into the field, those who have are highly successful.

This curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET), which was formerly the Engineers Council for Professional Development (ECPD).

State University of NY at Binghamton offers an ABET-accredited Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline, such as Mechanical Engineering Technology.

Mechanical Engineering Technology student observing a metallurgical sample on a metallograph in the College's Materials Laboratory.

MARKETING PROGRAMS

Leading to Associate in Applied Science Degree on Page 34.

FIRST YEAR

Fall Semester

		Hours per Week Class	Lab	Credits per Semester
EGR 110	Introduction to Technologies	1	0	½
MAT141	College Algebra and Trigonometry	4	0	4
MET 113	Engineering Drawing I	1	2	2
MET 121	Manufacturing Processes I	2	2	3
PHY 141	Physics	3	2	4
ENG 110	Written Expression I	3	0	3
	Social Science Elective	3	0	3
		17	6	19½

Spring Semester

		Class	Lab	Credits
MAT142	Applied Calculus I	4	0	4
MET 114	Engineering Drawing II	1	2	2
MET 122	Manufacturing Processes II	1	3	2
MET 132	Applied Mechanics	4	0	4
PHY 142	Physics	3	2	4
ENG 150	Technical Writing	3	0	3
		16	7	19

SECOND YEAR

Fall Semester

		Class	Lab	Credits
CST 122	Scientific Computer Programming— FORTRAN	2	2	3
EET 185	Electricity	2	3	3
MET 235	Strength of Materials	2	3	3
MET 241	Fluid Mechanics and Thermodynamics	2	3	3
MET 261	Engineering Statistics, Quality Control and Reliability	2	2	3
	Social Science Elective	3	0	3
		13	13	18

Spring Semester

		Class	Lab	Credits
EET 186	Electronics	2	3	3
MET 238	Mechanical Design	3	3	4
MET 252	Engineering Materials and Industrial Processes	3	3	4
MET 244	Thermodynamics	2	3	3
	*Technical Elective	(2-3)	(2-0)	(3)
		10-13	12-14	14-17

*Waiver of the elective is possible only with the approval of the Department Chairperson. It is not a degree requirement.

GRADUATION REQUIREMENT: 70½ CREDITS

MEDICAL ASSISTANT

Medical Assistant students performing a laboratory analysis in a Medical Assistant Procedures class.

A Medical Assistant is one of the most versatile of all the allied health professionals. There are a variety of job opportunities available for individuals with associate degrees. These are in physicians' offices, medical centers, clinics, hospitals, armed services, laboratories and pharmaceutical companies. One can also find employment in public, industrial, school, and correctional health departments, as well as in the fields of research, publishing and teaching. A medical assistant can continue education in such fields as allied health services, health care management, and teaching. The program is designed to enable graduates to do both administrative assisting and clinical/laboratory assisting.

By studying such specifically related subjects as medical assisting procedures, clinical laboratory procedures and human biology, students can acquire the knowledge and techniques to prepare patients for examinations and assist the physician. These courses also prepare them to perform not only routine medical procedures but also electrocardiography, audiography, urinalysis and hematological tests.

Courses in medical terminology, typewriting, transcription and medical office management prepare the student to conduct the business and administrative duties. English, social sciences, psychology and medical law are included to provide a general background.

Directed Practice supplements the campus segment of the curriculum as senior students participate in an externship program that requires a working experience in physicians' offices or other health care facilities.

The curriculum is accredited by the Council on Medical Education of the American Medical Association (AMA) and by the American Association of Medical Assistants (AAMA). Graduates are awarded the Associate in Applied Science degree and may elect to take an examination given by the AAMA to become Certified Medical Assistants. This CMA status is recognized throughout the country and can lead to better job opportunities and higher salaries.

Starting salaries of graduates of the program in 1980 ranged from $10,000 to $7,280, and fringe benefits often include free medical care including medications.

DEPARTMENT CHAIRPERSON, Mary Schum
Library, 2nd Floor, Room 14
Telephone 772-5128

FIRST YEAR

Fall Semester

			Hours per Week Class	Hours per Week Lab	Credits per Semester
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MDA	102	Medical Assisting Science	2	0	2
MDA	112	Standard First Aid and Personal Safety	0	2	1
MRT	105	Medical Terminology	2	0	2
*SEC	101	or 102 Typewriting	2	3	3
			12	7	15

Spring Semester

			Class	Lab	Credits
BIO	132	Human Biology II	3	2	4
MDA	115	Medical Assisting Procedures	3	2	4
MRT	107	Medical Transcription	0	4	2
MRT	115	Medical Terminology	2	0	2
SPK	102	Effective Speaking or	3	0	3
ENG	120	Written Expression II			
			11	8	15

SECOND YEAR

Fall Semester

			Class	Lab	Credits
BIO	160	Microbiology	2	3	3
MDA	206	Medical Office Management	3	3	4
MDA	208	Medical Law, Ethics and Economics	3	0	3
MDA	211	Medical Assisting Procedures	2	4	4
PSY	110	Psychology	3	0	3
			13	10	17

Spring Semester

			Class	Lab	Credits
MDA	201	Medical Assisting Procedures	2	4	4
MDA	245	Directed Practice	1	16	5
MDA	210	Pharmacology	2	0	2
SOC	110	Introduction to Sociology	3	0	3
			8	20	14

*Based on placement test

MEDICAL LABORATORY TECHNOLOGY

DEPARTMENT CHAIRMAN, George Ferrari
901 Front Street
Telephone 772-5067

The demand for medical laboratory technicians continues to increase, with the majority finding employment in hospital clinical laboratories and in analytical, control and research laboratories of chemical and pharmaceutical companies. Others are employed as research assistants at large universities and still others have continued their higher education toward the baccalaureate in this field at a four-year college or university.

Some graduates also become quality control technicians or laboratory technicians. The salary range for graduates has recently been between $10,100 and $6,870.

To provide the background necessary for work in these areas, the program includes courses in chemistry, physiology, microbiology and physics.

Extensive laboratory work in bioanalytical procedures, chemical instrumentation, microbiological and serological techniques and radiation physics helps to develop the skill needed for a wide range of job opportunities.

Work in the sciences is balanced by a program in general education including social sciences, English, and mathematics.

Satisfactory completion of 12 weeks of summer clinic experience is required. While there is no salary or direct credit associated with this experience, it is a vital and integral part of the students' educational experience.

This program has been granted in-progress status in connection with its application for accreditation by the National Accrediting Agency for Clinical Laboratories (NAACLS).

Medical Laboratory Technology students centrifuging a blood sample in preparation for a laboratory procedure in a hematology class.

FIRST YEAR
Fall Semester

		Hours per Week Class	Lab	Credits per Semester
BIO 131	Human Biology I	3	2	4
CHM 131	Chemistry	3	3	4
ENG 110	Written Expression I	3	0	3
MAT 114	Statistics	3	0	3
MLT 111	Introduction to Clinical Laboratory Methods and Practices	1	2	2
		13	7	16

Spring Semester

		Hours per Week Class	Lab	Credits per Semester
BIO 132	Human Biology II	3	2	4
BIO 150	Microbiology I	3	3	4
CHM 132	Chemistry	3	3	4
MLT 112	Hematology	2	4	3
ENG 120	Written Expression II or	3	0	3
SPK 102	Effective Speaking			
		14	12	18

Summer Term

*Summer Clinical Laboratory of 6 weeks

SECOND YEAR
Fall Semester

		Hours per Week Class	Lab	Credits per Semester
CHM 221	Organic Chemistry	2	3	3
MLT 211	Clinical Chemistry I	2	6	4
MLT 251	Microbiology II (Diagnostic)	3	4	4
PHY 117	Physics	2	2	3
	Social Science Elective	3	0	3
		12	15	17

Spring Semester

		Hours per Week Class	Lab	Credits per Semester
CHM 222	Organic Chemistry	2	3	3
CHM 224	Instrumental Analysis	2	6	4
MLT 212	Clinical Chemistry II	2	6	4
MLT 222	Clinical Physiology	2	0	2
MLT 232	Blood Banking and Serology	2	2	3
	Social Science Elective (ECO 107 Medical Economics and Law recommended)	3	0	3
		13	17	19

Summer Term

*Summer Clinical Laboratory of 6 weeks.

***GRADUATION REQUIREMENT**

MEDICAL RECORD TECHNOLOGY

DEPARTMENT CHAIRPERSON, Mary Rosato
Business Building, Room 031
Telephone 772-5051

FIRST YEAR

Fall Semester

			Hours per Week		Credits per
			Class	Lab	Semester
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MRT	101	Medical Record Science	2	2	3
MRT	105	Medical Terminology	2	0	2
*SEC	100	Typewriting	2	2	1
SOC		Social Science Elective	3	0	3
			15	6	16

*This is a five-week course given three times during the semester and must be taken until student reaches 35-words-a-minute proficiency.

Spring Semester

BIO	132	Human Biology II	3	2	4
MRT	107	Medical Transcription	0	4	2
MRT	110	Medical Record Science	2	4	4
MRT	115	Medical Terminology	2	0	2
SPK	102	Effective Speaking	3	0	3
SOC		Social Science Elective	3	0	3
			13	10	18

Summer Term

†MRT 144 Directed Practice . . . 40 Hours per week for 4 weeks—4 Credits

SECOND YEAR

Fall Semester

CST	110	Introduction to Data Processing	3	0	3
MRT	202	Medical Record Science	2	2	3
MRT	208	Advanced Medical Transcription	1	2	2
MRT	222	Medical Legal Aspects	3	0	3
MRT	236	Medical Care Evaluation	2	1	2
			11	5	13

Spring Semester

MRT	210	Medical Record Science	2	2	3
†MRT	245	Directed Practice	0	16	4
MRT	295	Medical Record Seminar	2	0	2
BIO	140	Pathophysiology	3	0	3
MRT	216	Clinical Practicum	0	2	1
			7	20	13

†GRADUATION REQUIREMENT

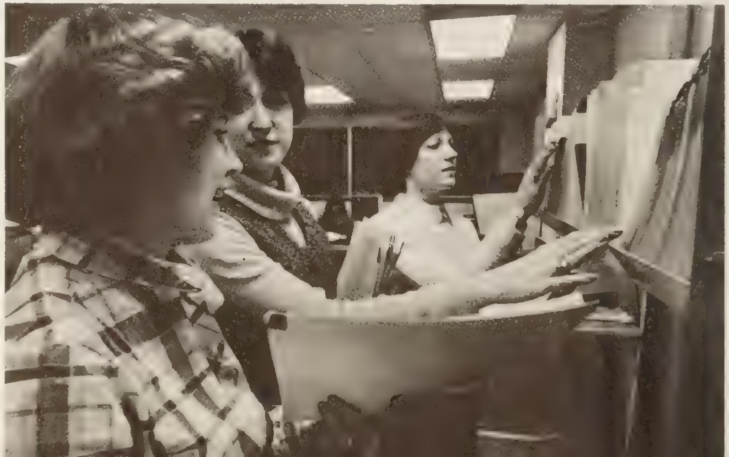
A medical record is the permanent report of a person's illness or injury kept to preserve information of medical, scientific and legal value. The record includes all medical reports which describe how the patient's illness was diagnosed and treated. Medical records are needed to help doctors diagnose and treat future illness, to verify insurance claims, to plan hospitals, to inform the public health officials, and to aid researchers.

The medical record technician works in the medical record department of a hospital, clinic, nursing home, school of veterinary medicine or other health facility and is responsible for many aspects of preparing, analyzing and preserving health information needed by the patients, by the hospital and by the public. The duties include reviewing medical records for completeness and accuracy and also translating diseases and operations into the proper coding symbols.

Other duties include filing medical records, preparing records for microfilming, typing reports of operations, X-rays and laboratory examinations, as well as histories, physical examinations and discharge summaries, compiling statistics of many kinds, assisting the medical staff by preparing special studies and tabulating data from records for research. Supervising the day-to-day operation of a medical record department, taking records to court and maintaining the flow of health information are also parts of the total work picture.

Practice in college medical record laboratory as well as in medical record departments of cooperating hospitals and other health care facilities, either within or outside the area, provides opportunities for additional educational experience which is the vital core of the program.

This curriculum is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association and by the American Medical Record Association. Students in this program are eligible to take the Medical Record Accredition Examination following graduation and upon completion receive the title of Accredited Record Technician (ART). Salaries for 1980 graduates ranged from $10,500 to $7,200 and averaged $8,250. Graduates can continue medical record education toward a baccalaureate degree at four-year colleges.



Instructor showing a Medical Record Technology student how the terminal digit color coded filing system works.

NURSING

DEPARTMENT CHAIRPERSON, Sarah Hannaway
901 Front Street
Telephone 772-5059

FIRST YEAR
Fall Semester

		Hours per Week Class	Lab	Credits per Semester
*ADN 100	Meeting Basic Human Needs	5	6	7
BIO 131	Human Biology I	3	2	4
ENG 110	Written Expression I	3	0	3
PSY 110	General Psychology	3	0	3
		14	8	17

Spring Semester

		Class	Lab	Credits
*ADN 101	Nursing Care During the Life Cycle	5	6	7
BIO 132	Human Biology II	3	2	4
ENG 120	Written Expression II	3	0	3
SOC 110	Introduction to Sociology	3	0	3
		14	8	17

SECOND YEAR
Fall Semester

		Class	Lab	Credits
*ADN 203	Immobility Concepts	3	4½	4
*ADN 204	Regulatory Concepts	3	4½	4
*ADN 205	Psychological Concepts I	1	3	2
ADN 296	Nursing Seminar I	0	2	1
BIO 150	Microbiology I	3	3	4
	Free Elective	3	0	3
		13	17	18

WINTER PRACTICUM

		Class	Lab	Credits
†ADN 298	Nursing Practicum (2 weeks)	0	40	2

Spring Semester

		Class	Lab	Credits
*ADN 206	I, I and O Concepts	3	4½	4
*ADN 207	Oxygenation Concepts	3	4½	4
*ADN 208	Psychological Concepts II	1	3	2
ADN 297	Nursing Seminar II	0	2	1
	Free Elective	3	0	3
		10	14	14

*Laboratory experiences for Nursing students may be scheduled during evening hours on their regular laboratory days.

†A clinical practicum of 80 hours to be arranged with a preceptor during the January break.

Nursing student conferring with instructor in the pediatric unit of a local hospital during her clinical experience.

Broome Community College offers a two-year, college-based curriculum to prepare graduates for immediate entrance into the first level of registered nursing. Graduates of this curriculum are eligible to take the New York State licensing examination for registered nurses. They are qualified for immediate employment in bedside nursing care, or they may wish to continue their education for the baccalaureate and higher degrees in the nursing field. The 1980 graduates of this program averaged $11,813 in their starting salaries, which ranged from $14,000 to $7,800.

The curriculum operates as a college program, with classes and laboratories held on the campus. Clinical instruction is in the cooperating hospitals of the Triple Cities. The clinical experiences, which are an integral part of the Nursing curriculum, include caring for individuals in all age groups, as well as observation periods in community health and welfare agencies.

Mature men and women are encouraged to enter this program along with recent high school graduates, whether they are married or single.

This program is accredited by the National League for Nursing.

OFFICE SERVICES ASSISTANT PROGRAM
Leading to Associate in Applied Science Degree
on page 56

GENERAL OFFICE CERTIFICATE PROGRAM
on page 56

RADIOLOGIC TECHNOLOGY (X-RAY)

DEPARTMENT CHAIRPERSON, Nancy Button
Business Building, Room 023
Telephone 772-5070

The radiographer finds employment in hospitals, with doctors who maintain private practices, with government agencies, both civil and military, and in industry. The work of the radiographer consists of making radiographs used in the diagnosis of disease and injury. The radiographer must also be competent in protecting the parts of the body which are not to be exposed to radiation and in operating X-ray equipment and developing film.

The Radiologic Technology program at Broome Community College consists of two academic years on campus and two summers at cooperating hospitals, the equivalent of 24 calendar months. The curriculum is an extremely active one, in which the student is responsible for maintaining academic requirements on campus as well as fulfilling the practical application of this theory at cooperating hospitals. Students should note carefully the demanding time requirements of this curriculum.

The clinical experience is a viable part of the educational process. Upon completion of 2200 hours of clinical practice as well as the academic requirements of the program, the graduate is eligible to sit for the examination of the American Registry of Radiologic Technologists for certification and licensure. Summer clinical experience is required for graduation.

This program is accredited by the Council on Medical Education of the American Medical Association and starting salaries for graduates of the Class of 1980 averaged $11,664.

Student radiographers practicing positioning of a patient in the College's Radiology Laboratory.

FIRST YEAR
Fall Semester

			Hours per Week		Credits per
			Class	Lab	Semester
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
RAD	100	Introduction to Radiologic Technology			2
		First half-semester	2	0	
		Second half-semester	0	16	
RAD	101	Radiologic Technology I	3	1	3
RAD	103	Positioning I	0	3	1
RAD	110	Methods of Patient Care	1	2	2
			12-10	8-24	15

WINTER TERM I

*RAD	131	Clinical Education I	(40 hours per week)		

Spring Semester

			Class	Lab	Credits
BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
PHY	117	Physics	2	2	3
RAD	102	Radiologic Technology II	3	0	3
RAD	104	Positioning II	0	3	1
RAD	132	Clinical Education II	0	16	2
			11	23	16

SUMMER TERM I

			Class	Lab	Credits
RAD	133	Clinical Education III	0	40	3

SECOND YEAR
Fall Semester

			Class	Lab	Credits
PSY	110	General Psychology	3	0	3
RAD	203	Positioning III	0	3	1
RAD	210	Radiologic Physics	4	0	4
RAD	220	Radiologic Pathology	2	0	2
RAD	230	Clinical Education IV	0	16	2
		Social Science Elective	3	0	3
			12	19	15

WINTER TERM II

*RAD	231	Clinical Education V	(40 hours per week)		

Spring Semester

			Class	Lab	Credits
RAD	216	Imaging Modalities	1	0	1
RAD	225	Special Radiographic Procedures	3	2	4
RAD	232	Clinical Education VI	0	16	2
RAD	245	Radiobiology	2	0	2
RAD	250	Image Assessment	2	1	2
RAD	295	Seminar in Radiography	2	0	2
			10	19	13

SUMMER TERM II

			Class	Lab	Credits
RAD	233	Clinical Education VII	0	40	3

*Successful achievement is a **GRADUATION REQUIREMENT**

SECRETARIAL SCIENCES

DEPARTMENT CHAIRPERSON, Chester J. Buglia
Business Building, Room 108
Telephone 772-5137

EXECUTIVE SECRETARY OPTION

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS112	Business Mathematics	2	0	2
ENG110	Written Expression I	3	0	3
†SEC 101	A,B,C Typewriting (Each is a 5-week course)			
	or	2	3	3
†SEC 102	A,B,C Typewriting (Each is a 5-week course)			
SEC109	Basic Transcription	3	0	3
**SEC110	or 111 Shorthand	2	3	3
	Liberal Arts Elective	3	0	3
SEC 130	Freshman Orientation	*	0	½
		15½	6	17½

†A test will determine which course. SEC 101 and SEC 102 are modular courses, with each module 5 weeks long
*SEC 130 Freshman Orientation meets every other week for one hour

Spring Semester

ENG120	Written Expression II	3	0	3
SEC102	A,B,C Typewriting (Each is a 5-week course)	2	3	3
	or			
	Business Elective	(3)	(0)	(3)
**SEC111	or 232 Shorthand	2	3	3
SEC151	Business Communications	3	0	3
	Science Elective	2-3	2-0	3
		12-14	6-8	15

**Students will take the appropriate course, based on his/her record

SECOND YEAR Fall Semester

BUS100	Accounting I	4	0	4
SEC240	Office Practice	0	4	2
SEC260	Model Office	0	4	2
SEC232	Shorthand	2	3	3
	or			
	Business Elective	(3)	(0)	(3)
ECO110	Introduction to Micro-Economics	3	0	3
	Liberal Arts Elective	3	0	3
		12-13	8-11	17

Spring Semester

SEC210	Executive Typewriting	2	2	3
SEC242	Office Procedures	3	0	3
BUS118	Business Law	3	0	3
SEC261	Model Office	0	4	2
	or			
	Business Elective	(3)	(0)	(3)
	Social Science Elective	3	0	3
		11-14	2-6	14-15

ENGINEERING (INDUSTRIAL) SECRETARY OPTION

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS112	Business Mathematics	2	0	2
ENG110	Written Expression I	3	0	3
†SEC 101	A,B,C Typewriting (Each is a 5-week course)			
	or	2	3	3
†SEC 102	A,B,C Typewriting (Each is a 5-week course)			
SEC109	Basic Transcription	3	0	3
**SEC110	or 111 Shorthand	2	3	3
	Liberal Arts Elective	3	0	3
SEC 130	Freshman Orientation	*	0	½
		*15½	6	17½

†A test will determine which course. SEC 101 and SEC 102 are modular courses, with each module 5 weeks long
*SEC 130 Freshman Orientation meets every other week for one hour

Spring Semester

ENG120	Written Expression II	3	0	3
SEC102	A,B,C Typewriting (Each is a 5-week course)	2	3	3
	or			
	Business Elective	(3)	(0)	(3)
**SEC111	or 234 Shorthand	2	3	3
SEC151	Business Communications	3	0	3
	Science Elective	2-3	2-0	3
		12-14	6-8	15

**Student will take the appropriate course, based on his/her record

SECOND YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS100	Accounting I	4	0	4
SEC234	Shorthand	2	3	3
	or			
	Business Elective	(3)	(0)	(3)
SEC240	Office Practice	0	4	2
MET129	Survey of Engineering Laboratories	2	2	3
	Social Science Elective	3	0	3
		11-12	6-9	15

Spring Semester

SEC212	Technical Typewriting	2	2	3
SEC242	Office Procedures	3	0	3
SEC260	Model Office	0	4	2
	Business Elective	3	0	3
	Liberal Arts Elective	3	0	3
ECO110	or 111 Macro or Micro Economics	3	0	3
		14	6	17

SECRETARIAL SCIENCES

Broome Community College offers three options of study in Secretarial Sciences—Engineering Secretary, Executive Secretary, and Office Services Assistant. The department also offers a one-year certificate in General Office. Graduates of the options usually obtain immediate employment as stenographers, secretaries or office assistants. Graduates average approximately $8,900 as starting salaries, which range from $6,000 to over $12,600 annually.

Engineering Secretarial students study engineering terminology to understand the specialized language of the engineer, and they are well prepared to work on engineering reports, records and correspondence.

Executive Secretarial students study terminology in such fields as law, education, insurance, real estate, and investments so that they can understand the specialized language used in the professions, as well as in government and business firms.

Office Services Assistant students study a variety of courses including accounting, typing, office management, and personnel management. The graduates of the Office Services Assistant option should find employment in word processing centers and other areas of office service work.

Word processing is intergrated into the current course offerings and culminates in the Model Office course.

The Secretarial Department faculty places the responsibility of class attendance upon the student, who should attend classes regularly and on time. If an employee does not show up for work, he/she can expect to be terminated. A student who does not attend classes can expect to fail.

Faculty will inform students of the College's and department's attendance policies. It is the student's responsibility to understand these policies. Whenever a faculty member feels that a student has been absent or tardy to the extent that it may be detrimental to the student's academic standing, the faculty member will inform the department chairperson, who in turn will meet with the student concerned for appropriate action.

Non-traditional students and part-time students should meet with the department chairperson for academic advisement prior to registering for classes.

OFFICE SERVICES ASSISTANT OPTION

FIRST YEAR

Fall Semester

			Hours per Week Class	Lab	Credits per Semester
BUS	100	Accounting I	4	0	4
BUS	112	Business Mathematics	2	0	2
†SEC	101	A,B,C Typewriting (Each is a 5-week course) or	2	3	3
†SEC	102	A,B,C Typewriting (Each is a 5-week course)			
SEC	109	Basic Transcription	3	0	3
ENG	110	Written Expression I	3	0	3
SEC	130	Freshman Orientation	*	0	½
			*14½	3	15½

†A test will determine which course. SEC 101 and SEC 102 are modular courses, with each module 5 weeks long

*SEC 130 Freshman Orientation meets every other week for one hour

Spring Semester

			Hours per Week Class	Lab	Credits per Semester
BUS	101	Accounting II	4	0	4
SEC	102	A,B,C Typewriting (Each is a 5-week course) or	2	3	3
		Business Elective	(3)	(0)	(3)
ENG	120	Written Expression II	3	0	3
SEC	151	Business Communications	3	0	3
		Science Elective	2-3	2-0	3
			14-16	0-5	16

SECOND YEAR

Fall Semester

			Hours per Week Class	Lab	Credits per Semester
BUS	261	Office Management	2	0	2
ECO	110	Introduction to Micro-Economics	3	0	3
CST	110	Introduction to Data Processing	3	0	3
SEC	236	Machine Transcription	2	2	3
		Liberal Arts Elective	3	0	3
		Business Elective	3	0	3
			16	2	17

Spring Semester

			Hours per Week Class	Lab	Credits per Semester
BUS	118	Business Law I	3	0	3
BUS	249	Principles of Personnel Management	3	0	3
ECO	111	Introduction to Macro-Economics	3	0	3
SEC	260	Model Office	0	4	2
SEC	242	Office Procedures	3	0	3
		Liberal Arts Elective	3	0	3
			15	4	17

GENERAL OFFICE CERTIFICATE PROGRAM

Fall Semester

			Hours per Week Class	Lab	Credits per Semester
†SEC	101	A,B,C Typewriting (Each is a 5-week course) or	2	3	3
†SEC	102	A,B,C Typewriting (Each is a 5-week course)			
BUS	110	Introduction to Business	3	0	3
ENG	100	Basic Language Skills or	3	0	3
ENG	110	Written Expression I	(3)	(0)	(3)
		Elect 1 of the following:	3	0	3
PSY	100	Psychology of Personal Adjustment			
PSY	110	General Psychology			
SAC	101	The Individual in a Changing Environment			
SAC	295	Seminar in Human Potential			
SEC	109	Basic Transcription	3	0	3
SEC	130	Freshman Orientation	*	0	½
			*14½	3	15½

†A test will determine which course. SEC 101 and SEC 102 are modular courses, with each module 5 weeks long

*SEC 130 Freshman Orientation meets every other week for one hour

Spring Semester

			Hours per Week Class	Lab	Credits per Semester
SEC	102	A,B,C Typewriting (Each is a 5-week course) or	2	3	3
		Business Elective	(3)	(0)	(3)
SEC	151	Business Communications	3	0	3
SEC	246	Office Machines	2	3	3
SEC	248	Office Procedures	3	0	3
		Business Elective	3-4	0	3-4
			13-15	3-6	15-16

Evening Part-Time Studies

(Continuing Education)

MEETING MANY NEEDS

People often think that higher education is available only for recent high school graduates. Broome Community College tries to reach out and meet the educational needs of ALL the people in Broome County. ''Community'' is part of the College's name and a large portion of its mission. BCC is concerned about meeting the needs of the part-time student, as well as those enrolled full time.

Anyone in the community may enroll as a part-time student, and BCC attracts a large number each year. The fall 1980 part-time enrollment, for example, was about 3,000 men and women, most of them for evening classes as they are largely adults who work during the day. In recent years the College has also increased its enrollment of part-time day students, and the total was more than 500 last fall.

PART-TIME STUDENTS . . . .

. . . are those who take fewer than 12 credits per semester, usually one or two courses. At BCC, part-time students can:

- Enroll in credit or non-credit mini courses.
- Take day courses, evening classes or both.
- Attend classes in the fall, spring or summer semester.
- Earn a degree or not, as they see fit. Certificate and diploma programs are also available.
- Apply for financial aid—if carrying 6 or more credits.
- Receive academic advice and personal counseling.
- Find other students over 21.
- Borrow books from the College Library.
- Carry one, two or three courses.
- Belong to the Evening Student Association.
- Receive Veterans' benefits.
- Transfer credits to BCC earned at another college.

Many firms have a tuition-reimbursement plan that pays all or part of an employee's tuition and costs if his/her courses are job-related.

The College conducts a special Information Session for new part-time students at the beginning of the fall and spring semesters to inform prospective students what programs are available, how to register, how to get started at BCC, and to answer their many questions.

The BCC Office of Continuing Education caters to the needs of part-time students.

BCC can design special courses for industry or community organizations or offer courses at off-campus sites—in their plant or the community.

For details on these programs, contact the Office of Continuing Education (Wales Building, Room 108 or call 772-5012).

ENROLLMENT

First-Time Enrollment

Those enrolling as part-time students for the first time at Broome Community College should be aware of the following services available to them:

- Information Sessions
- Registration
- Financial Aid
- Veterans Benefits

THE INFORMATION SESSIONS are conducted prior to each term. At this time, one can learn about the College and its programs, how to register, how to schedule courses, and how to get answers to questions.

REGISTRATION IS REQUIRED. First-time students must register, in person or by mail, and they must pay their tuition at the time they register in person or when billed if registering by mail.

FINANCIAL AID is available to part-time students who take 6 or more credits. Many companies have tuition reimbursement plans, and employees should familiarize themselves with their companies' policy. The College has a Financial Aid Office in the Wales Building, Room 101 (phone 772-5028) to answer questions about this. If one's company is paying, a letter to that effect should be brought to registration.

RESIDENCY REQUIREMENTS. See page 11.

Continued Enrollment

Those who are continuing their studies at the College as part-time students should always keep in close touch with their academic advisors and follow the procedure shown on pages 57 to 69 for their program of study, so that they do not overlook any courses they should take.

They also are eligible for the financial aid and veterans benefits of first-time, part-time students (see above), and they have to comply with the same residency requirements. They must also register, either by mail or in person. Tuition must be paid at the time of registration, if in person, or when billed if registering by mail.

EVENING STUDENT ACADEMIC ADVISEMENT

There are three academic advisers available during evening hours to accommodate the evening student population here at Broome Community College:

Douglas Garnar	772-5213 or 772-5054
David Kenien	772-5054 or 772-5012
Margaret Pimpinella	772-5055 or 772-5012

Day Part-time Students seeking advisement should contact the chairpersons of their academic departments. They should also apply to their chairpersons when they are ready to receive their associate degrees.

Evening Part-time Students who are nearing the completion of their certificate, diploma or degree requirements or those who need to know the requirements for any degree program offered in the evening, should consult one of the above academic advisers. Each adviser is prepared to handle questions concerning any degree program. There will be two advisers available from Monday through Thursday evening in Wales-108. No appointment is necessary.

CREDIT FOR PRIOR LEARNING

Transfer Credits

- Courses completed at another college prior to enrolling at Broome Community College will be considered for transfer credits. The student, however, must initiate the request for this consideration.
- An official transcript must be on file in the Registrar's Office for all students—part-time or full—prior to transcript review for transfer purposes.

Credit for Prior Non-Academic Experience

Credit may be given for life experiences or previous employment accomplishments. A number of methods exist for receiving this credit, and details are available from the Dean of Curriculum (Room 202, Wales Building, Phone 772-5091).

Students may also find it advantageous to request credit by examination for a course in whose field they have previous experience. They can do this by taking a special examination. If they pass this test, they can receive "Credit by Examination" for the course and will not have to take it, thus saving the cost of tuition and the semester(s) involved. Taking this examination for credit requires payment of a $25 fee for a non-laboratory course. If the course has a laboratory, an additional fee of $10 per hour will be charged for the laboratory portion of the exam. There will be a maximum charge of $65, which includes the original $25.

ADMISSIONS

Part-time Day and Evening Students

The *Application Form for Part-time Students* is used by the Office of Continuing Education for several procedures, one of which is admissions.

Students wishing to be admitted to part-time day or evening degree programs (with the exception of the Health Sciences) should fill out an Application Form for Part-time Students. This form may be obtained in the Wales Building Room 108. Upon acceptance, the student will receive a formal letter of admissions from the Dean of Continuing Education.

PART-TIME DAY STUDENTS DO NOT APPLY IN WALES-108. THEY SHOULD CONTACT THEIR DEPARTMENT CHAIRPERSONS DIRECTLY.

GRADUATION

Evening Students Only

Another important use of the Application Form for Part-time Students is to trigger paperwork on Certificate, Diploma and Degree Candidacy. All awards at Broome Community College are conferred in May. Evening students who expect to complete course requirements by May must declare their candidacy by filing an Application Form for Part-time Students in Wales 108 *prior to February 1* of that year. This will initiate an official review of the records and a formal letter of candidacy from the Dean of Continuing Education. The Registrar's Office will also be notified, and it will send out information in April pertaining to the awards ceremonies.

SPECIAL OFFERINGS FOR PART-TIME STUDENTS

Mini-Courses

These are non-credit courses, usually three or six weeks in length, running one evening per week. They cover a wide range of topics that may be employment related, directed toward hobbies or just subjects of general interest, and they have no homework, no exams and no grades. The College publishes printed bulletins each fall and early spring with a full listing of offerings. These mini courses have attracted more than 4,000 students a year in recent years.

Workshops and Seminars

The College conducts workshops and seminars in a variety of topics throughout the year. These are intended to update job skills and explore new fields of interest. Some of the seminars have been for senior citizens, for law-enforcement personnel, for women seeking jobs and educational information, for volunteer firemen, for community agencies, and for business and industry.

Weekend Courses

These may be offered Friday, Saturday or Sunday. They have the advantage of giving one a whole week to do the homework. They are usually credit courses. The number of offerings is increasing as student interest increases.

TV Credit Courses

One's TV set at home is the classroom, as the class work is shown on home TV channels. The College assigns an instructor to answer students' questions and give and grade examinations. Home work and tests can be mailed to the instructor. The TV class work is once a week, usually Saturday mornings.

Courses by Newspaper

One course is given each semester, with some of the class work being published in one of the local weekly newspapers. Contact with the college instructor can be made in person or by telephone, and home work and examinations are mailed in. These are credit courses.

Study Abroad

The College belongs to a consortium for international study, which offers credit courses in many countries, including England, Israel, Denmark and Canada. These courses can be for two weeks, for a whole semester or for an entire year. See page 18 for details.

Summer Session

Courses conducted during the summer present an opportunity for residents of Broome County to make up for past academic difficulties, lighten future study loads, or just take courses. One does not have to be a full-time BCC student to enroll, and both credit and non-credit courses are offered in the day and evening. The credit courses have been accepted for college credit at many colleges and universities across the country. Non-credit mini courses are given too. Special flyers are available free in the Office of Continuing Education.

Courses for Government Employees

The College participates in two programs for government employees—Employee Benefits Training Courses for New York State employees and the Local Government Training Institute for county, city and village employees. Courses are given for either credit or no credit, depending on specific training needs.

Special Need Courses

Many groups come to the College's Office of Continuing Education with needs for particular courses such as offerings for real estate salespeople and brokers, professional engineers, nurses, tool and die makers, insurance agents. These groups may need courses for upgrading skills, professional licensure or continuing education requirements. All such requests are welcome, and efforts will be made to design special courses with existing college faculty or qualified personnel from off campus.

EVENING STUDENT ASSOCIATION

The Evening Student Association (ESA) provides the evening students with a means of planning, organizing and operating activities and organizations for the part-time student. It provides a basis for discussion and action on academic, cultural and social matters and affords evening students an opportunity to express their views on significant issues. The ESA has ready access to the administration and campus community through the Office of Continuing Education and its staff advisor.

All evening students may be participating members and the ESA is a member of the United States Association of Evening Students and the Upstate New York Region. For more information, contact the Office of Continuing Education, Wales Building, Room 108.

DISPLAY OF CREDIT PROGRAMS

Following are displays of courses for the programs that the College offers to part-time students. Most of these are given in the evening, although some are day offerings. Students who pursue these programs should meet with their academic advisors or program coordinators to determine the best approach to meeting their individual needs.

The displays of courses in each curriculum are divided into three categories to assist the students in determining which courses to take and in what order.

Category 1 - **"Introductory Courses"** are entry-level courses in each program. They are frequently prerequisites for courses that must be taken later.

Category 2 - **"Additional Courses for Diploma"** are those which together with the introductory courses will satisfy the requirements for the curriculum diploma. The diploma is about the mid-point for the attainment of an associate degree.

Category 3 - **"Remaining Courses for Degree"** lsts the additional courses required for the completion of the associate degree.

Students should always consult with their advisor, as sometimes special course consideration is possible.

AUTOMOTIVE SERVICE SPECIALIST
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

The Automotive Service Specialist curriculum is formulated to prepare personnel to assume major responsibilities in the automotive service field. Students develop skills by working in various phases of the industry, such as repair and maintenance, shop management, parts inventory control, consumer relations. Curriculum content complies with the National Automobile Dealers' Association recommendations. The complete program includes practical work and training on the job. Such training constitutes 6000 hours of apprenticeship training.

		Credits
Semester 1		
ENG 110	Written Expression I	3
CAR 151	Auto Electrical Systems	3
Semester 2		
SPK 102	Effective Speaking	3
CAR 252	Integrated Automotive Systems	3
Semester 3		
MAT 139	College Algebra	4
CAR 153	Advanced Engine Diagnosis	3
Semester 4		
MAT 140	Trigonometry	4
CAR 154	Brake Systems & Chassis Repair	3
Semester 5		
PHY 141	Physics	4
CAR 155	Steering and Suspension	3
Semester 6		
PHY 142	Physics	4
CAR 156	Transmission and Drive Systems	3
Semester 7		
SOC	Social Science Elective	3
CAR 157	Power Plant Overhaul Theory	3
Semester 8		
SOC	Social Science Elective	3
CAR 158	Heating & Air-Conditioning Theory	3
Semester 9		
CAR 159	Auto Parts Department Management	3
CAR 160	Auto Service Department Management	3
CAR 297	Cooperative Work Experience	*9
AAS in Automotive Service Specialist Minimum Semester Credits		67

*To be awarded at the completion of both academic and on-the-job (apprenticeship) requirements.

More Information:
Douglas Rittenhouse
Program Coordinator
772-5074 or 772-5023

ACCOUNTING EMPHASIS
In Business
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Business Mathematics	2
BUS 118 Business Law I	3
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
Additonal Courses for Diploma	
BUS 157 Report Writing	3
Liberal Arts Elective	3
Accounting Courses	10
	32

Remaining Courses for Degree	
Accounting Courses	8
†Business Related Courses	8
Social Sciences	6
English Elective	3
BUS 221 Math for Business Analysis	2
or BUS 115 Business Statistics	3
PHS 111 Physical Science for Today	3
Electives (any field)	2-3
AAS Business (Accounting Emphasis) Minimum Semester Credits	65

†Business related courses from BUS, CST, MAT, MET or SEC course numbers as approved by the Academic Advisor for Business (See course descriptions on pages 70 to 117).

Students who have taken courses through AIB, LOMA, or other recognized national programs of study and examination should apply to the Academic Advisor for consideration of credit.

CHEMICAL EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
MAT 139 Algebra	4
CHM 145 Chemistry	4
English Electives (see list below)	3
Additional Courses for Diploma	
CHM 146 Chemistry	4
CHM 291 Organic Chemistry I	3
CHM 292 Organic Chemistry II	3
PHY 141 Physics	4
MAT 140 Trigonometry	4
CST 122 Computer Programming—FORTRAN (Technical)	3
	32
Remaining Courses for Degree	
PHY 142 Physics	4
CHM 293 Analytical—Instrumental Chemistry I	3
CHM 294 Analytical—Instrumental Chemistry II	3
English Electives (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Science Electives (see list below)	13
AAS Industrial Technology (Chemical Emphasis) Minimum Semester Credits	64

The following may be taken as approved technical/science courses to meet degree requirements: CHM 296, CHM 297, CHM 298, MAT 142, MAT 241, CST 130, EET 111, EET 112, EET 125, EET 126, CIV 260, MET 245, MET 261, BIO 111, BIO 112

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 110, ECO 111, PSY 110, SOC 110, SOS 130

CHILD CARE
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
PSY 110 General Psychology	3
PSY 211 Child Development	3
CDC 100 Introduction to the Education of Young Children	3
ENG 110 Written Expression I	3
CDC 120 Curriculum Development	3
Additional Courses for Diploma	
SOC 110 Introduction to Sociology	3
CDC 200 Social Psychology of Education	3
Child Care Electives (see list at right)	9
	30
Remaining Courses for Degree	
English/Literature	3
Humanities Elective (see list below)	3
Math or Science Elective (see list below)	6-8
Child Care Electives (see list below)	3
CDC 170 Practicum I	3
CDC 290 Practicum II	6
Related Approved Electives (see list below)	6
AAS Child Care Minimum Semester Credits	60-62

CDC Electives:
Students may select 12 hours of courses designated for Child Care, such as CDC 115, CDC 140, CDC 150, CDC 160, CDC 210, CDC 220, CDC 230, CDC 250, LIT 263

Related Electives:
Students may elect 6 hours from the Related Approved Electives from the following: PSY 103, PSY 212, PSY 214, PSY 217, PSY 220, PSY 227, SOC 230, SOC 210, SOC 234, or from other disciplines with permission.

Elective Areas:
Suggested Humanities—select from English, Languages, Fine Arts, Philosophy, Speech (SPK 102 recommended)

Math or Science—select from Math, Biology, Chemistry, Physics, Physical Science (MAT 111, BIO 131, CHM 120 recommended)

More Information:
Marilyn Schafer, Program Coordinator, messages 772-5083 or 772-5078
Francis J. Short, Chairman, 772-5087

CIVIL EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
MAT 139 Algebra	4
MAT 140 Trigonometry	4
English Elective (see list below)	3
PHY 141 Physics	4
Additional Courses for Diploma	
MET 132 Mechanics	4
CIV 155 Surveying	3
CIV 156 Route Surveying	4
CIV 159 Architectural Drafting I	3
CIV 228 Estimating and Construction Planning	3
	32
Remaining Courses for Degree	
PHY 142 Physics	4
MET 235 Strength of Materials	3
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Electives (see list below)	16
AAS Industrial Technology (Civil Emphasis) Minimum Semester Credits	64

The following may be taken as approved technical elective courses to meet degree requirements: CIV 160, CIV 161, CIV 163, CIV 251, CIV 252, CIV 255, CIV 257, CIV 260, CIV 262, CIV 264, CIV 266, CIV 268, CST 122, MAT 142, MAT 241, EET 111, EET 112

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 110, ECO 111, ECO 104, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

COMPUTER OFFERINGS

COMPUTER EMPHASIS
In Industrial Technology
(Associate in Applied Science)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

*Introductory Courses	Credits
ENG 110 Written Expression I	3
MAT 139 Algebra	4
CST 110 Intro. to Data Processing or CST 111 Intro. to Computer Studies	3
CST 115 Problem Solving with Pascal	3

Additonal Courses for Diploma	
CST 122 FORTRAN (Technical)	3
CST 112 Computer Logic	3
MAT 140 Trigonometry	4
2 Computer Electives	6
MAT 121 Finite Math or MAT 153 Discrete Math I	3-4
	32-33

Remaining Courses for Degree	
CST 200 Systems Analysis	3
CST 220 Microprocessors	3
Lab Science Sequence	8
English Elective	3
Social Science Electives	6
3 Approved Electives	9
AAS Computer Emphasis Minimum Semester Credits	64-65

DATA PROCESSING
(Associate in Applied Science)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

*Introductory Courses	Credits
BUS 100 Accounting I	4
CST 111 Introduction to Computer Studies	3
CST 115 Problem Solving with Pascal	3
ENG 110 Written Expression I	3

Additional Courses for Diploma Level	
BUS 101 Accounting II	4
BUS 115 Business Statistics or MAT 114 Statistics	3
CST 100 BASIC	1
CST 118 COBOL	3
ENG 120 Written Expression II	3
MAT 121 Finite Math	3
SPK 100 Basic Speaking or SPK 102 Effective Speaking	2-3
	32-33

Remaining Courses for Degree	
BUS 157 Business Report Writing	3
CST 116 RPG II	3
CST 218 Advanced COBOL	3
PHS 111 Physical Science for Today	3
2 Social Science Electives	6
BUS 270 Decision Making	3
CST 120 FORTRAN (Business) or CST 122 FORTRAN (Technical)	3
CST 200 Systems Analysis	3
CST 217 Advanced RPG II	3
AAS Data Processing Minimum Semester Credits	62-63

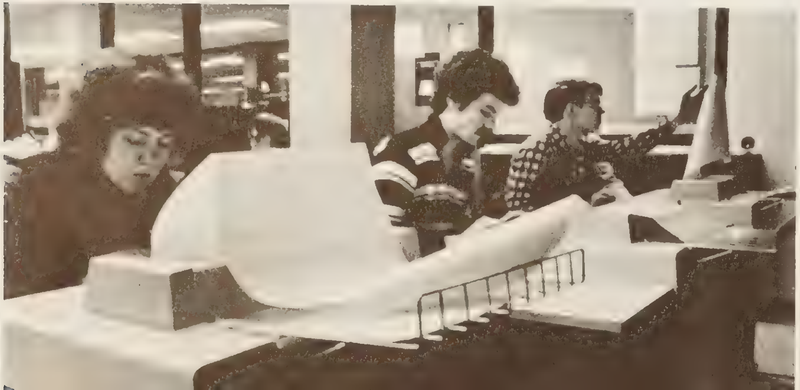
DATA PROCESSING—TECHNICAL
(Associate in Applied Science)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

*Introductory Courses	Credits
ENG 110 Written Expression I	3
CST 111 Intro. to Computer Studies	3
CST 115 Problem Solving with Pascal	3
MAT 114 Statistics	3
Laboratory Science Sequence	4

Additional Courses for Diploma Level	
PHI 202 Logic	3
CST 122 FORTRAN (Technical)	3
ENG 150 Technical Writing	3
MAT 153 Discrete Math I	4
Laboratory Science Sequence	4
	33

Remaining Courses for Degree	
CST 112 Computer Logic	3
CST 126 Assembler—BAL	3
CST 205 Advanced FORTRAN with Graphics	3
MAT 154 Discrete Math II	4
2 Social Science Electives	6
CST 202 Data Structures	3
CST 220 Intro. to Microprocessors	3
CST 222 Topics in Computer Systems	3
SPK 102 Effective Speaking	3
AAS Data Processing—Technical Minimum Semester Credits	64



COMPUTER SCIENCE
(Associate in Science Degree)
See page 38.

CRIMINAL JUSTICE
(Associate in Applied Science)

This program is designed for individuals considering employment upon graduation or for those already employed in the Criminal Justice field. Students intending to transfer for advanced degrees are advised to pursue the Criminal Justice option in Liberal Arts (see page 46).

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
SOC 110 Introduction to Sociology	3
Criminal Justice Courses	6
Additional Courses for Diploma	
PSY 110 General Psychology	3
SPK 102 Effective Speaking	3
POS 201 The American Political System or POS 204 American State & Local Government	3
Sociology Elective	3
Psychology Elective	3
Criminal Justice Courses	6
	33

Remaining Courses for Degree	
Lab Science or Math or Combination	6
Philosophy Elective	3
Free Electives (any field: Social Science recommended)	6
Criminal Justice Courses	12
AAS Criminal Justice Minimum Semester Credits	60

Credit for academy training will be considered after admission to candidacy on the basis of about one credit per 40 or one credit per 50 contact hours, with option to receive transfer credit for other Criminal Justice related programs up to 12 credits total. The requirement will be that the individual must provide documentation of attendance and relevancy of work.

More Information:
Francis J. Short, Chairman, 772-5087
William Michalek, Program Coordinator, messages, 772-5082

DIETETIC ASSISTANT
(Leads to Certificate)

This program is designed for individuals already employed in the food service field, as there is a requirement for supervised work experience by a Registered Dietician. All persons entering the program are responsible for finding a preceptor, and registrations are on a pre-application basis.

	Credits
DIA 101 Nutrition	3
DIA 102 Institution Food Preparation	3
DIA 201 Food Management Systems	3
DIA 202 Personnel Management	3
Apply for Certificate—Dietetic Assistant	12

More Information:
Francis J. Short, Chairman, 772-5087
Lorraine Gula, Program Coordinator, messages 772-5012 or 772-5087

ELECTRICAL EMPHASIS
In Industrial Technology
(Associate in Applied Science)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
MAT 139 Algebra	4
MAT 140 Trigonometry	4
EET 125 Circuits I	3
ENG 110 Written Expression I	3
Additional Courses for Diploma	
EET 126 Circuits II	3
EET 255 Electronics I	4
MET 113 Engineering Drawing	2
CST 122 Computer Programming—FORTRAN (Technical)	3
Social Science Elective (see list below)	3
Approved Technical Electives (see list below)	3
	32
Remaining Courses for Degree	
EET 235 Electrical and Electronics Drawing	2
EET 245 Electrical Machines	4
EET 256 Electronics II	4
EET 257 Electronics III	4
EET 267 Digital Electronics & Microprocessors	4
PHY 141 & PHY 142 Physics	8
ENG 150 Technical Writing	3
Social Science Elective (see list below)	3
AAS Industrial Technology (Electrical Emphasis) Minimum Semester Credits	64

Anyone starting the Electronic sequence will be required to take EET 267

Approved Technical Electives:
EET 111, EET 112, EET 268, MAT 114, MAT 241, MAT 243, MAT 246, MET 245, MET 132, MET 247, MET 255, MET 261, MET 280, MET 285, MET 286, MET 287, CIV 228, CIV 268, CIV 155, CHM 145, CHM 146, CST 126, CST 130, CST 200, CST 202, CST 204, CST 205

Suggested Social Science Courses:
ECO 104, ECO 110, ECO 111, PSY 100, PSY 110, SOC 110, SOS 130

Courses in the fast changing engineering technologies such as Electronics, Design & Fabrication, Computers and Machine & Controls, can not be used for degree requirements if they were taken more than 5 years prior to graduation date. One exception to this rule would be the student who has been in the degree program for a number of years and has taken at least one required course every fall and spring semester.

FIRE PROTECTION TECHNOLOGY
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
ENG 110 Written Expression I	3
Fire Protection Courses	9
Additional Courses for Diploma	
SPK 102 Effective Speaking	3
Mathematics or Science Elective (see below)	3
Chemistry (see below)	3
Social Sciences (see below)	3
Fire Protection Courses	6
	30
Remaining Courses for Degree	
Fire Protection Courses	6
Social Sciences (see below)	3
Health (see below)	3
Management (see below)	6
Electives (see below)	12
AAS Fire Protection Technology Minimum Semester Credits	60

Chemistry: Suggest CHM 120

Mathematics: Suggest MAT 139 (4 Credits)

Social Sciences: Choose from History, Anthropology, Sociology, Psychology, Political Science, Economics

Health: Advanced First Aid Emergency Medical Technician Programs or equivalent may be submitted for approval

Fire Protection Courses: Select from FRS 101, FRS 103, FRS 105, FRS 107, FRS 108, FRS 200, FRS 201, FRS 205, FRS 210, FRS 250, FRS 299

Management: Suggest BUS 245, BUS 246, BUS 258, BUS 262, BUS 150.

Electives: Courses with FRS, SAF, MAT designators, CHM 121, CHM 290 or other courses with permission.

The Fire Protection Technology Program is designed to provide fire fighters and related fire service personnel with specialized training. The curriculum has been developed by a local advisory committee to meet the needs of the area, and specialized courses as well as general education courses constitute the degree program. Specialized courses include Fire Fighter Tactics and Strategy, Arson Investigation, Hydraulics, Hazardous Materials, Fire Prevention, and Building Construction.

This program is open to both paid and volunteer fire fighters of the community, as well as those persons in related firematic areas.

More Information:
Francis J. Short, Chairman, 772-5087
Ogden J. Clark, Program Coordinator, messages 772-5012 or 772-5087.

GENERAL OFFICE
(Leads to Certificate)
See page 56

This program can be taken as a full-time one-year program or taken as a part-time program either daytime or evening.

INDIVIDUAL STUDIES
(Associate in Applied Science or Associate in Science Degrees)
See page 43

INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE OPTION
In Industrial Technology
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
CHM 120 Fundamentals of Chemistry	4
ENG 110 Written Expression I	3
MAT 139 Algebra	4
SAF 100 OSHA Codes and Regulations	3
Additional Courses for Diploma	
Social Science Elective	3
MAT 124 Statistics	3
BIO 131 Human Biology	4
SAF 120 Introduction to Industrial Hygiene	3
SAF Industrial Safety Courses	6
	33
Remaining Courses for Degree	
Social Science Electives	3
ENG 150 Technical Writing or SPK 102 Effective Speaking	3
†SAF Industrial Safety Courses	9
Technical Electives (see below)	8
Business Electives (see below)	7
AAS Industrial Technology Industrial Safety and Occupational Hygiene Option Minimum Semester Credits	62

†Industrial Safety courses—SAF 100 OSHA Codes and Regulations, SAF 101 Accident Investigation and Prevention, SAF 102 Design and Evaluation of Safety Program, SAF 105 Material Handling and Storage of Common and Special Products, SAF 110 Ventilation and Exhaust, SAF 111 Machine Guarding, SAF 120 Introduction to Industrial Hygiene, SAF 130 Product Safety, SAF 250 Special Topics (1 to 3 credits), FRS 101 Fire Prevention and Protection, FRS 200 Hazardous Materials (All are 3 credits, except where marked otherwise.)

Technical electives—MET 287 Plant Layout and Material Handling (2 credits), FRS 108 Building Construction (3 credits), CHM 121 or CHM 290 Chemistry. Others by permission.

Business electives—BUS 118 Business Law (3 credits), BUS 150 Personnel Administration (2 credits), BUS 207 Managerial Accounting I (2 credits), BUS 252 Supervision of Personnel (2 credits). Others by permission.

More Information:
Francis J. Short, Chairman, 772-5087
Donald Pixley, Program Coordinator, Messages, 772-5012 or 772-5087

INTERIOR DESIGN
(Leads to Certificate)

This is a credit program for individuals interested in a career in interior design or those currently employed in home furnishings or design related fields who would like to obtain greater knowledge and expertise. Those whose interests in design are not job-related are also encouraged to enroll.

Full-time Liberal Arts students are referred to the Interior Design Model for the A.A. degree on page 46.

			Credits
ART	101	Introduction to Art	3
ART	105	Introduction to Design	3
INT	101	History of Architecture—Exterior and Interior	3
*INT	110	Interior Design I	4
*INT	111	Interior Design II	4
INT	120	Construction and Workroom Techniques I	2
INT	121	Specification Writing for Interior Designers	2
INT	130	Rendering	2
INT	140	Fabric Analysis	2
CIV	159	Architectural Drafting I	2
BUS	262	Small Business Management	3

*These courses have prerequisites

More Information:
Robert Keller, Program Coordinator, 772-5095 or 772-5021

LIBERAL ARTS & SCIENCES
(Associate in Arts Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
Liberal Arts Courses	6
Additional Courses for Diploma	
English (Composition)	6
Approved Humanities	3
Approved Social Sciences	6
Approved Liberal Arts Courses	11
	32
Remaining Courses for Degree	
Remainder of degree requirements (see below)	30
AA Liberal Arts & Sciences Minimum Semester Credits	62

Minimum requirements for AA degree:

English—a minimum of 12 credits, of which 6 shall be in composition and 6 in literature

History—a minimum of 6 credits in approved courses including HIS 100 The Rise of the West

Humanities—a minimum of 6 credits (6 in Philosophy or 6 in a foreign language)

Mathematics—students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics • Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics • Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional math. They may, however, elect an appropriate math course or an elective in another field

Natural and Physical Sciences—a minimum of 8 credits

Social Sciences—a minimum of 6 credits

Electives—minimum of 16 credits (A maximum of 15 credits may be taken outside the offerings in Liberal Arts & Sciences with the approval of the Dean of Liberal Arts)

Satisfactory completion of all courses in a curriculum or as approved in a department

The Associate in Arts program is structured to allow the greatest flexibility in course selection and sequence. It is strongly recommended to begin the program by first satisfying the English requirement, i.e., 6 hours from ENG 100, ENG 110, or ENG 120.

LIBERAL ARTS AND SCIENCES
Science Option
(Associate in Science)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
ENG 110 Written Expression I	3
ENG 120 Written Expression II	3
Additional Courses for Diploma	
2 Science Electives (see below)	8
2 Science Electives (see below)	8
HIS 100 Rise of the West	3
History Elective	3
2 Social Science Electives (see below)	6
Mathematics or Philosophy or Foreign Language (see below)	6-8
	34-36
Remaining Courses for Degree	
2 Science Electives (see below)	8
2 Science Electives (see below)	8
2 Literature Electives	6
†Math or Liberal Arts Electives	6-8
AS degree in Liberal Arts Minimum Semester Credits	62-66

"Sequences" in biology, chemistry, physics or physical science must be taken for each of these 2 science requirements. (Recommended: BIO 111, 112; CHM 145, 146; PHY 161, 162; CHM 245, 246.) At least 8 hours must be at the 200 level.

Courses to be chosen from ANT, ECO, POS, PSY, SOC, SOS designators.

Students who have not passed Advanced Algebra or its equivalent in high school (usually 3½-4 high school units) should take Algebra and Trigonometry or Pre-Calculus the first year followed by a year of Calculus with Analytic Geometry in the second year. Only if students have the equivalent of Calculus with Analytic Geometry upon entry, can they take the non-math elective.

† If the Calculus and Analytic Geometry requirement was met the first year, electives must be Philosophy (6) or Foreign Language (6-8). Higher level math can only be elected by approval of Dean if transfer needs require it. Humanities requirement would then be waived.

LIBERAL ARTS & SCIENCES
General Studies Emphasis
(Leads to Diploma)

	Credits
English	6
Social Sciences & Humanities	18
Approved Electives	8
Liberal Arts Diploma (General Studies Emphasis)	32

The awarding of this diploma does not necessarily mean the student is a candidate for the Associate in Arts degree. Courses must have approval of the Liberal Arts Division, however, to insure that work is appropriate for the Associate in Arts Degree.

MARKETING MANAGEMENT AND SALES
General Emphasis
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
BUS 100 Accounting I	4
BUS 101 Accounting II	4
BUS 112 Business Mathematics	2
BUS 118 Business Law I	3
ENG 110 Written Expression I or ENG 100 Basic Language Skills	3
Additional Courses for Diploma	
BUS 157 Report Writing	3
Liberal Arts Elective	3
Business Courses (see below)	10
	32
Remaining Courses for Degree	
Business Courses (see below)	8
Business Related Courses (see below)	8
Social Sciences	6
English Elective	3
BUS 115 Business Statistics or BUS 221 Math for Business Analysis	2-3
PHS 111 Physical Science for Today	3
Electives (any field)	2-3
AAS in Marketing Management and Sales Minimum Semester Credits	63-65

Business students who have taken courses through AIB, LOMA, or other recognized national programs of study and examination should apply to the Academic Advisor for individual consideration or credit.

Business related courses from BUS, CST, MAT, MET or SEC course numbers as approved by the Academic Advisor for Business.

Suggested Management Electives: BUS 141, BUS 150, BUS 224, BUS 243, BUS 246, BUS 252, BUS 255, BUS 256, BUS 257, BUS 258, BUS 261, BUS 270, BUS 360, BUS 361, BUS 362.

Suggested Sales Electives: BUS 120, BUS 129, BUS 131, BUS 141, BUS 147, BUS 152, BUS 154, BUS 226, BUS 238, BUS 247.

NOTE: A number of choices exists in The Business—General Emphasis Diploma Program. By carefully selecting the proper Business courses, students can generate a concentration in a particular area, such as Sales, Retailing or Management. To identify these courses, students should discuss their interests with their academic advisor.

The courses completed to earn the diploma are acceptable as credits toward an Associate in Applied Science degree in Marketing Management and Sales.

APPLIED MATHEMATICS EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
MAT 139 Algebra	4
MAT 140 Trigonometry	4
English Elective (see list below)	3
Additional Courses for Diploma	
MAT 142 Applied Calculus I	4
MAT 241 Applied Calculus II	3
PHY 141 Physics	4
PHY 142 Physics	4
MAT 124 Statistics	3
Approved Elective (see list below)	3
	32
Remaining Courses for Degree	
MAT 243 Differential Equations	4
MAT 246 Applied Linear Algebra	4
CST 122 Computer Programming—FORTRAN (Technical)	3
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Electives (see list below)	12
AAS Industrial Technology (Applied Mathematics Emphasis) Minimum Semester Credits	64

English Electives:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Social Science Electives:
ECO 104, ECO 110, ECO 111, PSY 100, PSY 110, SOC 110, SOS 130

Approved Electives:
MAT 244, CST 112, CST 126, CST 130, CST 200, CST 202, CST 204, CHM 145, CHM 146, CHM 291, CHM 292, CHM 293, CHM 294, CHM 296, CHM 297, CIV 155, CIV 156, CIV 251, CIV 252, EET 125, EET 126, EET 255, EET 256, EET 257, EET 258, MET 113, MET 114, MET 132, MET 235, MET 245

In recent years the demand for higher level mathematics courses has decreased. However, arrangements can be made to allow serious degree candidates to complete their requirements.

MECHANICAL EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
MAT 139 Algebra	4
MAT 140 Trigonometry	4
MET 113 Engineering Drawing I	2
English Elective (see list below)	3
Additional Courses for Diploma	
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
CST 122 Computer Programming—FORTRAN (Technical)	3
MET 132 Applied Mechanics	4
Approved Technical Electives (see list below)	3
	32
Remaining Courses for Degree	
MET 235 Strength of Materials	3
MET 253 Engineering Materials & Industrial Processes	3
MET 261 Engineering Statistics & Quality Control	3
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Technical Electives (see list below)	10
AAS Industrial Technology (Mechanical Emphasis) Minimum Semester Credits	64

The following may be taken as approved technical elective courses to meet degree requirements: MET 114, MET 245, MET 247, MET 249, MET 255, MET 272, MET 280, MET 285, MET 286, MET 287, EET 111, EET 112, EET 125, EET 126, EET 255, EET 256, EET 257, CIV 159, CIV 160, CIV 161, CIV 251, CIV 252, CIV 255, CHM 145, CHM 146, MAT 142, MAT 241

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

MENTAL HEALTH AND RETARDATION EMPHASIS—Liberal Arts & Sciences
(Associate in Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
ENG 110 Written Expression I	3
PSY 110 General Psychology	3
MAT Mathematics (Statistics recommended)	3
HIS 100 Rise of the West	3
Additional Courses for Diploma	
LAB Science (BIO 111 or 131 recommended)	4
ENG 120 Written Expression II	3
SOC 110 Introduction to Sociology	3
PHI 206 Social & Political Philosophy	3
LA Elective	3
PSY 223 Intelligence and Mental Retardation	3
	31
Remaining Courses for Degree	
LAB Science (BIO 112 or 132 recommended)	4
PSY 217 Counseling & Interviewing	3
SOS 288 Seminar in Community Social Service Org.	3
PSY 227 Behavior Modification	3
PSY 214 Abnormal Psychology	3
SOS 290 Social Science Field Work	3
Approved Electives as Mental Health & Retardation Emphasis	12
AS in Liberal Arts (Mental Health & Retardation Emphasis) Minimum Semester Credits	62

More Information:
Rita Hogan, chairperson, Social Sciences, 772-5084 or 772-5021

PARALEGAL ASSISTANT
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
ENG 110 Written Expression I	3
PLA 100 Introduction to Paralegal Profession I	3
PLA 101 Introduction to Paralegal Profession II	3
PSY 110 General Psychology	3
Additional Courses for Diploma	
ENG 120 Written Expression II	3
PLA 102 Introduction to Paralegal Profession III	3
PLA 210 Legal Drafting	3
PLA 200 Real Property Law	3
PLA 205 Techniques of Research	3
BUS (Business) Elective	3
	30
Remaining Courses for Degree	
BUS 100 Accounting I	4
BUS 101 Accounting II	4
PLA 215 Estates, Probates & Trusts	3
PLA (Paralegal) Electives	7
SOC 110 Sociology	3
Math/Science	6
Social Science or Humanities Elective	3
AAS Paralegal Assistant Minimum Semester Credits	60

Suggested Math/Science Courses:
MAT 114, MAT 121, BIO 131, CHM 120

Suggested Social Science or Humanities Courses:
PHI 102, SPK 102, PSY 103, Any economics (ECO) course

More Information:
Francis J. Short, Department Chairman, 772-5087
Matthew Vitanza—Program Coordinator, (messages) 772-5012 or 772-5087

PRODUCTION MANAGEMENT EMPHASIS
In Industrial Technology
(Associate in Applied Science Degree)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

***Introductory Courses**	**Credits**
MAT 139 Algebra (see below)	4
MAT 140 Trigonometry (see below)	4
MET 113 Engineering Drawing I	2
English Elective (see list below)	3
Additional Courses for Diploma	
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
PHY 141 Physics	4
BUS 149 Management & Organization I	2
MET 280 Management Decisions	2
MET 285 Time, Motion & Wage Study	2
Approved Electives (see list below)	4
	32
Remaining Courses for Degree	
CST 122 Computer Programming—FORTRAN (Technical)	3
BUS 252 Supervision of Personnel	2
MET 261 Engineering Statistics & Quality Control	3
MET 286 Production Control	2
MET 287 Plant Layout & Materials Handling	2
PHY 142 Physics	4
English Elective (see list below)	3
Social Science Electives (see list below)	6
Approved Electives (see list below)	7
AAS Industrial Technology (Production Management Emphasis) Minimum Semester Credits	64

Must have a minimum of 4 hours of Mathematics as a requirement for the degree if background makes it unnecessary to take MAT 139 Algebra and MAT 140 Trigonometry.

The following may be taken as approved elective courses to meet degree requirements:
MET 114, MET 132, MET 235, MET 245, MET 253, MET 255, MET 272, EET 111, EET 112, EET 125, EET 126, CIV 159, CIV 160, CIV 161, BUS 118, BUS 154, BUS 243, BUS 255, MAT 142, MAT 241

Suggested English Courses:
ENG 100, ENG 110, ENG 120, ENG 150, SPK 102

Suggested Social Science Courses:
ECO 104, ECO 110, ECO 111, ECO 120, PSY 100, PSY 110, SOC 110, SOS 130

GENERAL TECHNICAL STUDIES
In Industrial Technology
(Leads to Diploma)

	Credits
Technical Courses (in one curriculum)	12
Math & Other Technical Subjects	12
English & Other Liberal Arts Courses	8
Industrial Technology Diploma (General Technical Studies Emphasis)	32

The Industrial Technology Diploma (General Technical Studies Emphasis) offers broader topic coverage during the initial study prior to specialization within an Associate Degree program. A student must have written approval from the Academic Advisor for Technologies.

TOOL & DIE MAKING
(Associate in Occupational Studies Degree)
(Certificate in Machinist Related Instruction)

SUGGESTED SEQUENCE: Students may select courses from any of the categories, but it is suggested that these sequences be followed to ensure that the proper prerequisites have been completed:

*Introductory Courses	Credits
TDA 111 Blueprint Reading	3
MET 113 Engineering Drawing I	2
MET 114 Engineering Drawing II	2
MAT 106 Basic Technical Mathematics I	3
MAT 107 Basic Technical Mathematics II	3

Additional Courses for Certificate	
TDA 113 Survey of Basic Industrial Safety & First Aid	2
TDA 114 Benchwork	2
MET 121 Manufacturing Processes I	3
MET 122 Manufacturing Processes II	2
BUS 255 Industrial and Labor Relations	2
TDA 120 Precision Measurement and Inspection	3
TDA 200 Metallurgy	2
TDA 130 Tool Grinding	2
TDA 140 Production Processes	3
Certificate in Machinist Related Instruction—Minimum Semester Credits	34

Remaining Courses for Degree	
TDA 132 Statics	2
TDA 235 Strength of Materials	3
ENG 150 Technical Writing or ENG 110 Written Expression I	3
BUS 252 Supervision of Personnel	2
ECO 104 Labor Economics and American Industry	3
EET 181 Installation and Maintainence of Electric Motors	2
TDA 261 Introduction to Quality Control and Inspection	3
TDA 248 Hydraulics and Pneumatics	3
TDA 250 Control Systems	3
TDA 230 Tool Design	4
MET 223 Manufacturing Processes III	2
Associate in Occupational Studies (AOS) in Tool & Die Design	64

More Information:
Herbert Durst, program coordinator, 772-5215
Blaine Ellis, Mechanical Engineering Technology
772-5023

MINI COURSES (Non-Credit)

- Are designed for leisure learning.
- Usually meet once a week.
- Last from 3 to 8 weeks.
- Begin throughout the year.
- Require no homework, no exams or grades.
- Do not require a special educational background.
- Provide learning without pressure.
- Are designed for those interested in learning more about a subject in an informal setting.

PEOPLE TAKE MINI COURSES TO . . . .

- Explore a new subject.
- Try out "going to college."
- Lessen anxiety while taking courses.
- Update occupational skills.
- Improve their quality of life.

Mini courses are given during the fall, spring and summer semesters at Broome Community College, and they cover a wide variety of topics and subjects. These are non-credit courses, usually given one evening a week, and generally for three or six weeks.

One does not have to be a previously or currently enrolled BCC student to take a mini course, and many residents of Broome County have first been introduced to the campus by their enrollment in these courses.

About 200 mini courses are given each year, and they attract about 4,000 students altogether. The following abbreviated list of some recent offerings gives some idea of the type of courses and the range of interests covered:

Refresher Typing
Basic Color Photography
Fire Tatics and Strategy
Refresher Nursing
Genealogy
Heating with Wood
Buying and Selling Your Business
Basic Drawing for the Young Students
Wheat Weaving
How to Play Backgammon
Lip Reading
Speed Reading
Anatomy of an Auto
Assertiveness
Computers for Kids

Designed for the Adult

Mini courses are designed for anyone interested in learning more about a subject in an informal setting. These courses have no requirements, homework, examinations or grades. They do provide a chance to expand one's knowledge in a field, brush up on a skill, explore a new hobby or craft, or assist in one's job—all in a relaxed manner. The new "College for Kids" program is designed to provide expanding opportunities for young people.

Contract Courses and In-Service Training

The Office of Continuing Education designs and presents courses and seminars specifically intended to meet the training and educational needs of industry, business and agencies in the area.

The staff is able to tailor the course material and presentations to uniquely fit each client's personnel training needs. This flexibility allows successful growing experiences for the people and institutions involved.

The courses are given on campus or in various other locations including the place of employment. Many topics are addressed, such as management, microprocessors, supervision, pre-retirement education, human services skills, communication skills, personal growth, and more.

More information about these programs is available at the Office of Continuing Education.

Certificate of Participation

Certificates of Participation are given to those attending 3 out of 3 sessions, 4 out of 4 sessions or 5 out of 6 sessions. Many area employers will reimburse employees receiving a Certificate of Participation for a job-related course.

Easy Registration Procedure

Mini courses are offered continuously throughout the year. Five flyers a year list the courses, with their descriptions, times, dates, fees. A form is included in each term's flyer for easy mail-in registration, or one can register in person at any time. Registrations are accepted on a first-come, first-served basis.

Course Development

The mini courses are a joint effort between Broome Community College faculty, community people, area agencies, organizations and business firms. Groups interested in teaching or co-sponsoring a mini course are encouraged to discuss the possibilities with the College's Office of Continuing Education. Many programs offered each year come about because someone suggested them, or a group was concerned about a real need in the community. A teaching interest and course proposal form is available for individuals wishing to teach a particular subject. These forms will be mailed upon request.

Course Descriptions

All courses listed in this section are scheduled to be offered during the 1981-82 academic year, unless otherwise indicated. The offering of any course, however, is subject to sufficient enrollment. Courses numbered from 100 to 199 are generally first-year courses, and those numbered in the 200's are usually taken in the second year.

BUSINESS COURSES IN ACCOUNTING, BUSINESS ADMINISTRATION AND MARKETING

BUS 100 Accounting I **4 Credits**
Basic concepts and procedures in the accounting cycle. Emphasis on journals, ledgers, worksheets and financial statements. Merchandising transactions, special journals, payroll procedures.
4 Class Hours

BUS 101 Accounting II **4 Credits**
Continued study of concepts and the special procedures for handling cash, inventories, receivables, payables, deferrals, accruals, plant assets. Accounting for partnerships, corporations and manufacturing concerns.
4 Class Hours
Prerequisite: BUS 100 Accounting I

BUS 102 Payroll Accounting **2 Credits**
A comprehensive study of Federal and State laws and regulations affecting payrolls and payroll taxes. Practical report preparation and reporting requirements. Proper accounting practices to record payroll taxes.
2 Class Hours

BUS 110 Introduction to Business **3 Credits**
General background of modern business practices through the study of organization and management, production, human resources, accounting and finance, marketing, and the information needed for control and management decisions in business and society.
3 Class Hours

BUS 112 Business Mathematics **2 Credits**
Number systems and arithmetic processes. Problems in percentage, simple interest, compound interest, discounting notes, depreciation, insurance, taxes and problems in accounting and marketing.
2 Class Hours

BUS 115 Business Statistics **3 Credits**
Concepts and mechanics of measures of central tendency, measures of dispersion, probability and correlation as they relate to general problems in business and economics.
3 Class Hours
Prerequisite: MAT 003 Basic Mathematics Review A or equivalent

BUS 117 Business and Society **3 Credits**
The role of business in the contemporary world. Increasingly difficult parameters for business despite the growing demands of accountability from government and of social responsibility from consumers. Business values and ethics, the role of business and government, environmental issues and energy policy, business and labor, business and the consumer, the influence of multinational corporations.
3 Class Hours

BUS 118 Business Law I **3 Credits**
Law as an evolutionary and democratic process. Court structure, administrative law, law-of-contracts, legal principles of agency and partnerships.
3 Class Hours

BUS 120 Business Law II **3 Credits**
The law governing the negotiation or transfer of commercial paper and the sale of personal property. The law of personal and real property and sundry topics: bailments, insurance, landlord-tenant relationships, corporate and labor law.
3 Class Hours
Prerequisite: BUS 118 Business Law I

BUS 125* Real Estate Law **5 Credits**
For real estate people preparing for the New York State Real Estate Broker's Licensing Examination. Under the supervision of the New York State Department of Licenses. (Credits applicable only to Business program with prior approval from one's academic advisor.)
5 Class Hours

*TAUGHT EVENINGS ONLY

BUS 129 Consumer Behavior **3 Credits**
Emphasizes the development of how people make purchase decisions in the market place. Consumer decision-making, learning, brand loyalty and market segmentation.
3 Class Hours

BUS 131 Personal Finance **3 Credits**
Guidelines to everyday financial problems regarding budgeting, installment buying, credit, insurance, taxes, savings, investments and purchasing such long-term investments as a home or automobile.
3 Class Hours

BUS 135* Investments **2 Credits**
Application of sound investment principles as they relate to stocks and bonds. Importance of the stock markets, their operation and their place in our society. Current happenings such as over-all market behavior, stock splits, rights and offerings will be studied in various companies, making the subject matter current and relevant to financial events of the day. A model portfolio approach with weekly review by class participants.
2 Class Hours

BUS 138* Income Tax I **1 Credit**
Basic Federal income tax rules and regulations for the preparation and filing of personal income tax forms. Personal exemptions, exemptions for dependents, gross income inclusions and exclusions, itemized and standard deductions, tax tables and rates.
1 Class Hour

BUS 139* Income Tax II **1 Credit**
Preparation of personal income tax returns involving more complicated items, such as capital gains and losses, rental property, dividends, other income and special deductions.
1 Class Hour

BUS 140* Taxes for Small Business **2 Credits**
Basic Federal and State laws, regulations and rules governing the preparation of income tax returns for small businesses with major emphasis on single proprietorships and partnerships.
2 Class Hours

BUS 141 Marketing **3 Credits**
The planning and strategy formulation of marketing goods, services, ideas or people, including the principal environmental opportunities and constraints facing the manager of both profit and non-profit organizations. Marketing mix (product, price, place, promotion) and the marketing concept. Lecture, discussion, and cases.
3 Class Hours

BUS 144* Domestic Transportation **2 Credits**
Analysis of practices, theories and policies of the transport network. Study of transportation changes—in the locations and movements of goods and people as well as in the physical and institutional organizations (mergers, conglomerates) and their effect on the entire scope of transportation.
2 Class Hours

BUS 147* Retail Buying/Merchandising **3 Credits**
The principles of what, when, where and how to buy in order to successfully purchase a stock of merchandise that can be resold at a profit. Analysis of merchandising mix, stock turns, and elements of effective display. Promotional aspects including point of sale, impulse and window displays.
3 Class Hours

BUS 149* Principles of Organization and Management **2 Credits**
An introduction to the principles, practices and problems of business organizations. A study of the management process—planning, organizing, staffing, directing and controlling. (Completing this course will not give students credit for BUS 246 Principles of Management).
2 Class Hours

BUS 150* Personnel Administration **2 Credits**
Techniques and methods to achieve utilization of manpower in business through proper selection, placement, training, job evaluation, wage setting and employee relations. (Completing this course will not give students credit for BUS 249 Personnel Management).
2 Class Hours

BUS 152 Selling Fundamentals **3 Credits**
Principles of sales with practical application. Steps leading to a successful sale—prospecting, planning and delivering, dramatizing, handling objections, closing, building good will. Development and presentation of a complete procedure for a product or service.
3 Class Hours

BUS 154* Purchasing **3 Credits**
Analytical approach to techniques employed in the industrial purchasing phase of marketing. Emphasis on the organization of the purchasing functions as an operational unit of the firm directed toward procurement activities.
3 Class Hours

BUS 157 Business Report Writing **3 Credits**
Training in logical analysis of business case problems, applied to the preparation of accurate written reports. Methods and skills in formal and informal business writing. Preparation of tables, charts, reference citations and bibliographies. Improvement of basic business writing skill involved in interoffice memos, letters of adjustment, bids, quotations, public relations.
3 Class Hours

BUS 160 Principles of Real Estate **3 Credits**
Economic and social impact of real estate. Emphasis on the real estate cycle dealing with essentials of real property, finance and legal aspects.
3 Class Hours

BUS 162 Real Estate Investments **3 Credits**
Approach and basic methodology for analyzing a real estate investment. Emphasis is focused on liquidity, maximum current income, future income, protection from inflation, tax shelter, capital gains and principal protection.
3 Class Hours

BUS 163* Real Estate for Salespersons **4 Credits**
Course designed to meet New York State requirements for licensure as a real estate salesperson. Covers land use regulation, law of contracts, real estate instruments, real estate mathematics, real estate finance, closing and closing costs, brokerage and the law of agency, valuation and listing procedures, license law and ethics, human rights and fair housing.
4 Class Hours

***TAUGHT EVENINGS ONLY**

BUS 164* Real Estate for Brokers **4 Credits**
Course designed to meet New York State requirements for licensure as a real estate broker. Covers land use regulation, operation of a real estate broker's office, general business law construction, subdivision and development, leases and agreements, liens and easements, taxes and assessments, investment property, voluntary and involuntary alienation, property management, condominiums and cooperatives, appraisal, advertising, rent regulations.
4 Class Hours
Prerequisite: BUS 163 Real Estate for Salespersons

BUS 165 Insurance **3 Credits**
Insurance principles and coverage, types of carriers, organizations, history of insurance, analysis of types of coverage available for business and individuals in the casualty and life fields.
3 Class Hours

BUS 166 Property and Casualty Insurance **3 Credits**
Common policy provisions relating to property and casualty insurance and surety. Topics include automobile liability and physical damage, workmen's compensation, general liability, New York Insurance Law, rating and multi-line coverage.
3 Class Hours

BUS 170* Insurance for Agents and Brokers **8 Credits**
Comprehensive survey of insurance. Fire, marine, automobile, owner liability, burglary, boiler, machinery, accident and health, fidelity and surety insurance. Insurance law and duties of the agent.
8 Class Hours

BUS 200 Intermediate Accounting I **4 Credits**
An intensive study of accounting theory and procedures. Emphasis on balance sheet accounts and their interrelationships with income statement accounts. The accounting process and correction of errors. Advanced treatment of cash, receivables, inventories.
4 Class Hours
Prerequisite: BUS 101 Accounting II

BUS 201 Intermediate Accounting II **4 Credits**
A more advanced treatment of accounting for fixed assests, intangible assets, current and long-term liabilities. Corporation accounting, funds flow reporting, financial statement analysis.
4 Class Hours
Prerequisite: BUS 200 Intermediate Accounting I

BUS 205 Cost Accounting I **4 Credits**
Nature and purpose of cost accounting. Job order and process costing. Accounting for factory overhead and analysis of variances. Accounting for labor and material.
4 Class Hours
Prerequisite: BUS 101 Accounting II

BUS 206 Cost Accounting II **4 Credits**
Further consideration of cost accounting principles, standard costs and variances. The construction of budgets, profit planning. Flexible budgets. Direct costing. Break even analysis. Accounting for by-products and joint products. Non-manufacturing costs.
4 Class Hours
Prerequisite: BUS 205 Cost Accounting I

BUS 207* Managerial Accounting I **2 Credits**
Use of accounting information by management in decision making. Accounting procedures for the evaluation of performance and responsiblity accounting in business and industry.
2 Class Hours

BUS 208* Managerial Accounting II **2 Credits**
Relationship of accounting information to such areas of managerial responsibilities as planning and control, cash budgeting and cash flow, relevant cost analysis, profit planning and effects of price level changes.
2 Class Hours
Prerequisite: BUS 207 Managerial Accounting I

BUS 220 Financial Information Systems **3 Credits**
Development of practicable accounting systems to provide the information required for effective managerial control. Techniques of flow charting, developing written procedures, analysis of organization structures, form design applied to the basic area of business.
2 Class Hours, 2 Laboratory Hours
Prerequisite: BUS 101 Accounting II and CST 110 Introduction to Data Processing

BUS 221* Mathematics for Business Analysis **2 Credits**
Basic quantitative mathematical methods for management. Techniques and their application to business problems. Foundation for further study of advanced principles of quantitative analysis.
2 Class Hours
Prerequisite: BUS 112 Business Mathematics

BUS 224 Business Finance **3 Credits**
Financial principles and procedures. Detailed analysis of forms of business organizations. Single proprietorship, partnerships and corporations together with all financial instruments, surplus, reserves and equities. Application of ratios, rules for budgeting, capitalization, insurance, reorganization.
3 Class Hours

BUS 226* Credit and Collections **3 Credits**
Nature and role of credit, credit management, types of credit, credit department organization, credit reports and investigation, collection procedures, investigation and analysis of mercantile and financial institution credit risks, analysis of financial statements. It is suggested that BUS 100 Accounting I be taken prior to this course.
3 Class Hours

BUS 229 Advertising **4 Credits**
Development, economies, functions of advertising. Cost application, media, testing and research methods. Development of advertisements, copy and layout methods and problems of reproduction. Planning the advertising campaign with step by step developments. Lectures, discussions, demonstrations. BUS 141 Marketing is recommended as preparation for this course.
4 Class Hours

BUS 238* Marketing Research **3 Credits**
Methods of collecting and interpreting marketing information which affect marketing management. Specific applications to problem identification in market development, gauging market potential and implementation of research designs in the market place. It is suggested that BUS 115 Business Statistics be taken prior to this course.
3 Class Hours

***TAUGHT EVENINGS ONLY**

BUS 242 Marketing Seminar **3 Credits**
Senior capstone course which integrates various business subjects previously studied. Individual and team approach to analysis of comprehensive marketing and management cases and cooperative consideration of alternative decisions to problem solving.
3 Class Hours
Prerequisite: Permission of Chairperson of Business Department for non-marketing majors

BUS 243* Industrial Management **2 Credits**
Fundamentals of organization and management of industrial concerns. Emphasis upon leadership, human behavior, analysis in decision making. Examination of problem solving in industrial enterprises and applying management principles. (Completing this course will not give students credit for BUS 246 Principles of Management).
2 Class Hours

BUS 245 Management: A Behavioral Approach **3 Credits**
A comprehensive analysis of managerial theories and an integration of selected social sciences to investigate organizational problems related to managerial functions. Communications, decision-making, control theory. Impact of the organizational environment upon human behavior.
3 Class Hours

BUS 246* Principles of Management **3 Credits**
Principles of managerial practices. Planning, organizing, directing, and controlling. Exposes students to proper methods and techniques to achieve employee and job satisfaction. Topics covered include scientific management, behavioral theory, and introduction to management science.
3 Class Hours

BUS 247* Sales Management **3 Credits**
Development of control techniques in the administration of sales forces. Incentive systems, territory planning, development of sales potentials, personnel problems peculiar to this field.
3 Class Hours

BUS 249 Personnel Management **3 Credits**
Principles of managerial practices. The four functions of management—planning, organizing, directing and controlling. Designed to expose the student to the proper methods and techniques to achieve employee and job satisfaction. Processing, developing, maintaining and proper utilizing of the labor force. A review of the history and impact of organized labor incorporating economic, political and social pressures which influence employment. Effective interview poise, personal appearance, interviewing techniques, job opportunities and placement services. Correct preparation of a resume and the utilization of references.
3 Class Hours

BUS 252* Supervision of Personnel **2 Credits**
Concepts and psychology of personnel supervision. Emphasis on the application of management theory through use of case studies and classroom discussions.
2 Class Hours

***TAUGHT EVENINGS ONLY**

BUS 255* Industrial Labor Relations **2 Credits**
Processes of bargaining and contract administration between industrial employers and unions representing employees, as a system of compromising opposing objectives and settling differences. Origins of unions, how they organize and gain recognition and how the labor agreement is negotiated and administered. Interaction among employees, stewards and supervisors. Labor laws. Institutions such as the National Labor Relations Board, mediation services, arbitration boards and courts. (Completing this course will not give students credit for BUS 256 Labor Relations for Business and Industry).
2 Class Hours

BUS 256 Labor Relations for Business and Industry **3 Credits**
Analysis of labor relations and collective bargaining procedures. Policies of organized labor, employers and government in solving labor-management disputes. Grievance procedure, wage and price policies, arbitration, mediation, negotiations and labor contracts.
3 Class Hours

BUS 257* Organizational Behavior **3 Credits**
Processes affecting the behavior of individuals and groups are examined with particular attention to their managerial implications. Relevant concepts and research evidence help students to analyze their experiences and generalize from them. Similarities and differences among effective organizational structures and managerial strategies in the public, private and non-profit sectors.
3 Class Hours

BUS 258* Human Relations in Business **2 Credits**
Basic psychological principles applied to the problems of employee selection, training, evaluation, merit rating and advancement. Social interaction and human relations in industry. Motivation concepts and techniques, job satisfaction, morale, conference leadership and employee and management development.
2 Class Hours

BUS 260* Management of Physical Distribution—Transportation **2 Credits**
Rates, documentation and career liability (legal implications), factors in routing transportation in the milieu of physical distribution and current issues in the field.
2 Class Hours
Prerequisite: BUS 144 Domestic Transportation

BUS 261 Office Management **2 Credits**
A comprehensive study of modern management principles and practices in office organization, operation and control. Office layout, personnel, office equipment, processing of information and the planning, flow and measurement of work within the office.
2 Class Hours

BUS 262 Small Business Management **3 Credits**
Designed for those interested in small business as owner-managers. Development of sound management and modern techniques covering organization, marketing, financing, insurance risk, legal implications, regulations, taxes. (Completing this course will not give students credit for BUS 360, 361, 362).
3 Class Hours

BUS 264 Retailing **3 Credits**
Fundamentals of purchasing, merchandising, pricing, promotion. Principles of retail management. Coordination of accounting and basic marketing concepts at the market focal point.
3 Class Hours

BUS 270 Decision Making **3 Credits**
An introduction to managerial problems relating to the planning and controlling functions, which provide guidelines to making rational decisions. A realistic approach utilizing cases and simulation will be taken to expose the student to quantitative as well as subjective analysis to point out the constraints placed upon management.
3 Class Hours
Prerequisite: BUS 115 Business Statistics

BUS 295 Accounting Seminar **4 Credits**
In-depth treatment of accounting for payroll taxes followed by actual completion of required state and federal tax forms. Thorough coverage of the Individual Tax Form 1040, schedules A, B, C, D, E and G, small business taxes, schedules C, SE, and investment credit. Corporate Tax Form 1120. Accounting concepts and current trends in accounting as reflected through financial statement analysis.
4 Class Hours

BUS 297 Cooperative Work Experience **1-3 Credits**
Cooperative education is available to students in the marketing management, marketing sales and accounting curriculums. On-the-job experience may be obtained in such areas as retailing, banking, fast foods, government services and hotel management, as well as in CPA firms, public accounting offices, industrial, business and government offices where accounting is performed. To be eligible for these opportunities a student should maintain an over-all cumulative grade-point average of 2.5, with a 3.00 average in business courses, and have no F's.
Cooperative work students will meet with the coordinator one hour each week.

BUS 299 Independent Study **1-4 Credits**
The student, under the guidance of a faculty member, undertakes an investigation, study and research in an advanced concept or problem concerning his/her major field of study. Only one independent study course is allowed per semester.
Prerequisite: Approval of Faculty Member and Department Chairperson

BUS 360* Establishing a Small Business **1 Credit**
Designed for those who wish to establish their own business as owner-managers. Development of sound management and modern techniques covering talents needed for success. How to select the type business to enter, to acquire a franchise, and to choose the location.
3 Class Hours (5 weeks)

BUS 361* Operating a Small Business **1 Credit**
Designed for those who wish to operate their own business or who are presently operating their own business. Development of sound management and modern techniques covering the production of a product or service, marketing of the business, supplier relations, techniques of management, and the safeguarding of the firm's assets.
3 Class Hours (5 weeks)

BUS 362* Record Keeping in a Small Business **1 Credit**
Designed for those interested in small business as owner-managers. An in-depth treatment of fundamentals of the accounting process, evaluating the financial health of the business, regulations and taxes affecting the small business and using the computer in operating the small business.
3 Class Hours (5 weeks)

*TAUGHT EVENINGS ONLY

ANTHROPOLOGY

ANT 110 Physical Anthropology and Archeology **3 Credits**
Introduction to human evolutionary history and present day variation examining genetics, ecology, fossils and the primate order. Relationships of physical evolution to early cultural developments as revealed by the archeological record.
3 Class Hours

ANT 111 Cultural Anthropology **3 Credits**
Comparison of various Western and non-Western societies and cultures. Anthropological theory, linguistics, problems of modernization of traditional societies.
3 Class Hours

ANT 299 Independent Study **1-3 Credits**
An individual student project in anthropology which is beyond the scope of requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: 3 semester hours in Anthropology

ART

ART 101 Fine Arts: Introduction to Art **3 Credits**
Basic art principles and concepts together with their historical development as shown in representative works of painting, sculpture and architecture. Gallery visits.
3 Class Hours

ART 105 Introduction to Design **3 Credits**
Investigation of visual perception and organization. Through experimentation with a variety of media, use of visuals, lecture, discussion and text, the student is expected to gain heightened sensory awareness of the design elements, establishing the fundamental perceptual skills needed in working with the concept of design.
3 Class Hours

ART 115 Drawing **3 Credits**
Intensive drawing instruction in charcoal, pencil, pen and ink, pastel and mixed media, life drawing, still-life composition.
6 Studio Hours

ART 116 Painting I **3 Credits**
Beginning painting instruction and practice in techniques of oil painting, still-lifes, landscapes.
6 Studio Hours
Prerequisite: ART 115 Drawing or Instructor's permission

ART 120 Sculpture Fundamentals **3 Credits**
Abstract elements of sculptural form as revealed through analysis of student work and historical examples. Emphasis on developing the student's ability to utilize concepts in practice and to expand his/her understanding of the general function of form as symbolic structure.
6 Studio Hours

ART 130 Pottery **3 Credits**
Study of the basic processes of the design and creation of ceramics, both functional and sculptural. Fundamentals of hand-building, potter's wheel, glazing and firing.
6 Studio Hours

ART 140 Printmaking **3 Credits**
Three equal parts to course—linecut, woodcut, monotype. Explanation, uses, technical demands, potential and limitation of each process. Students to develop images for blocks or plates.
3 Class Hours

ART 215 Painting II **3 Credits**
Continuation of painting instruction and practice done in ART 116 Painting I.
6 Studio Hours
Prerequisite: ART 116 Painting I or instructor's permission

ART 216 Painting III **3 Credits**
Painting from costumed model; advanced composition devices.
6 Studio Hours
Prerequisite: ART 215 Painting II or instructor's permission

ART 220 Life Sculpture **3 Credits**
The principles of abstract form applied to the human body, and the expressive possibilities of the human figure explored. Studies of actual models in oil-base clay later to be cast into plaster or carved in wood or stone.
6 Studio Hours

Independent Study: Art **1-3 Credits**
ART 297 Sculpture
ART 299 Art History
An individual student project concerned with advanced work in a specific area of art. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in Art.

AUTOMOTIVE SERVICE SPECIALIST

These courses are all designed to provide theory-related instruction to supplement apprenticeship training on the job, and practically all are taught in the evening only.

CAR 151 Auto Electrical Systems **3 Credits**
Basic electrical systems found in automotive equipment: lighting and ignition systems, schematic troubleshooting, power assist systems, wiring harnesses.
3 Class Hours

CAR 152 Integrated Automotive Systems **3 Credits**
Introductory course for automotive apprentices. Theory for foundation in the field of Automotive Technology.
3 Class Hours

CAR 153 Advanced Engine Diagnosis **3 Credits**
Continuation of CAR 152 Integrated Automotive Systems, with special emphasis on advanced diagnostic testing and repair procedures. Application of the chassis dynamometer, HC/CO testers and oscilloscopes.
3 Class Hours.

CAR 154 Brake Systems and Chassis Repair **3 Credits**
Related trade theory of servicing brake systems, window regulators, seat mechanisms, exhaust systems and other chassis accessories. Delivery and road test procedures.
3 Class Hours

CAR 155 Steering and Suspension Systems **3 Credits**
Steering systems (both power and manual), suspension systems, wheel alignment. Suspension, front end, steering repair and alignment.
3 Class Hours

CAR 156 Transmission and Drive Systems **3 Credits**
Automotive transmissions, clutches, standard transmissions, overdrives, propeller shafts, drive axles. Theory of operation, diagnosis, maintenance and repair.
3 Class Hours

CAR 157 Power Plant Overhaul Theory **3 Credits**
Theoretical procedures necessary to rebuild an automotive engine. Disassembly and assembly techniques along with the restoring of tolerances by the machining of engine components.
3 Class Hours

CAR 158 Heating and Air-Conditioning Theory **3 Credits**
Automotive heating and air-conditioning systems emphasizing the basic air conditioning cycle.
3 Class Hours

CAR 159 Automotive Parts Department Management **3 Credits**
In-depth study of parts numbering, storage, cataloging, retrieval, ordering, stocking, management techniques.
3 Class Hours

CAR 160 Automotive Service Department Management **3 Credits**
Marketing techniques, financial analysis, personnel management, work scheduling and distribution, use of pricing manuals.
3 Class Hours

BIOLOGY

BIO 111 General Biology I **4 Credits**
Principles of evolution and ecology as unifying themes in biology. Evolutionary processes and ecological adaptations illustrated by plant and animal diversity. The community of cellular life processes. Current environmental problems. The laboratory includes rigorous field trips.
3 Class Hours, 3 Laboratory Hours

BIO 112 General Biology II **4 Credits**
Principles of evolution and ecology as unifying themes in biology. The human animal and its systems. Concepts of animal behavior. Classical genetics, current concepts of gene function and human genetics. Organismal growth and development. Current environmental problems. The laboratory includes rigorous field trips.
3 Class Hours, 3 Laboratory Hours

BIO 120 Human Sexuality **3 Credits**
Explores information about sexual attitudes, relationships, sexual anatomy, contraception, venereal disease. Course aims to make students feel more comfortable thinking and talking about sex and to prepare them to make rational decisions about this important aspect of their lives.
3 Class Hours

BIO 131 Human Biology I **4 Credits**
Normal structure (gross and microscopic) and function of the skeletal, muscular and nervous systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.
3 Class Hours, 2 Laboratory Hours

BIO 132 Human Biology II **4 Credits**
A continuation of BIO 131 Human Biology I covering the circulatory, respiratory, digestive, urinary, reproductive and endocrine systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.
3 Class Hours, 2 Laboratory Hours
Prerequisite: BIO 131 Human Biology I or permission of instructor

BIO 140 Pathophysiology **3 Credits**
Symptoms, syndrome and etiology of pathogenic processes affecting the function and structure of the body.
3 Class Hours
Prerequisite: BIO 132 Human Biology II

BIO 150 Microbiology I **4 Credits**
The biology of the common bacteria and related microorganisms. General microbiology including asepsis, disinfection, sterilization, cultivation, pathogenicity, resistance, identification.
3 Class Hours, 3 Laboratory Hours

BIO 160 Microbiology **3 Credits**
Position of microorganisms in the biological world, as well as their cultivation and identification. Asepsis, disinfection and sterilization. Disease transmission and the human elements in defense. For Medical Assistant and Dental Hygiene students.
2 Class Hours, 3 Laboratory Hours

BIO 295 Biology Seminar—Current Trends in Biology **1 Credit**
Current trends and developments in the biological sciences presented and discussed by students. Each student is expected to present at least one oral report per semester and to take part in the discussions of other reports. Use of recent literature is stressed. Seminar may be taken each semester for a maximum of 2 credits.
1 Class Hour
Prerequisite: A college general biology course or permission of instructor

CHEMISTRY AND CHEMICAL ENGINEERING TECHNOLOGY

CHM 102 Preparatory Chemistry **4 Credits**
Introductory course in chemistry emphasizing problem-solving techniques related to chemical concepts. Atomic structure, stoichiometry, metric units, chemical bonding, chemical nomenclature, solution chemistry.
4 Class Hours

CHM 120 Fundamental Chemistry **4 Credits**
First course for Fire Protection Technology, Health Sciences and Criminal Justice students. Composition of substances, atomic structure, periodicity, bonding, chemical equations, states of matter, aqueous solutions, chemical equilibria and introduction to organic chemistry.
3 Class Hours, 3 Laboratory Hours

CHM 121 Forensic Sciences **4 Credits**
Introduction to forensic chemistry for Criminal Justice students. Examination of firearms, cartridges, explosives, drugs and other types of physical evidence. Emphasis on proper handling of substances found in crime scene investigations. Laboratory techniques include many modern instrumental methods, such as gas chromatography, infrared and mass spectroscopy.
3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 120 Fundamental Chemistry or permission of department

CHM 125* Chemistry **3 Credits**
Fundamental concepts of inorganic chemistry. Composition of substances, kinetic and molecular theories, atomic structure and bonding, solutions and colloids, ions in solution and introduction to organic chemistry. For Fire Protection Technology students.
2 Class Hours, 3 Laboratory Hours

CHM 131 Chemistry **4 Credits**
Fundamental concepts of inorganic chemistry. Stoichiometry, atomic structure, periodicity, chemical bonding, kinetic theory, states of matter, acids, and equilibria. For Medical Laboratory Technology students.
3 Class Hours, 3 Laboratory Hours

CHM 132 Chemistry **4 Credits**
A continuation of CHM 131 Chemistry including chemical equilibria, coordination chemistry and an extensive treatment of classical quantitative analysis. For Medical Laboratory Technology students.
3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 131 Chemistry

CHM 141 General Chemistry **4 Credits**
Chemical principles, applications and laboratory experimentation to evaluate important scientific and technological issues in our complex society. Energy sources: coal, gas, petroleum, solar, geothermal, food. Radioactivity, effects of radiation, nuclear weapons and man's effect on the climate. Warming of the earth, the greenhouse effect, atmospheric particles, supersonic transport, weather modifications. For Liberal Arts non-science majors.
3 Class Hours, 3 Laboratory Hours

*TAUGHT EVENINGS ONLY

CHM 142 General Chemistry **4 Credits**
A continuation of CHM 141 General Chemistry. Chemistry of the air, water, and land environment. Chemicals in the internal environment: food and drugs. Basic concepts of organic chemistry, polymers and plastics, natural and synthetic organic medicinal compounds, legislation of food additives, regulation of carcinogens, chemistry of living systems, chemistry in criminal investigations. For Liberal Arts non-science majors.
3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 141 General Chemistry

CHM 145 Chemistry **4 Credits**
A comprehensive treatment of general chemistry for the science-oriented student emphasizing the quantitative relationships in chemical reactions and the current atomic and bonding theories explaining chemical phenomena. Periodicity, writing, balancing and interpretation of chemical equations, stoichiometric calculations based on equations, solution stoichiometry. Laws governing physical states and changes in state, physical properties of solutions. For Engineering Science and Liberal Arts science majors.
3 Class Hours, 3 Laboratory Hours
Prerequisite: High School Chemistry or CHM 102 Preparatory Chemistry

CHM 146 Chemistry **4 Credits**
Continuation of CHM 145 Chemistry including chemical thermodynamics, kinetics, acid-base theory, chemical equilibria in aqueous solution and electrochemistry. For Engineering Science and Liberal Arts science majors.
3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 145 Chemistry

CHM 161 Chemistry **4 Credits**
Basic concepts underlying chemical action emphasizing measurement, basic chemical calculations, atomic structure and the periodic law. Chemical bonding, states of matter, solutions, kinetic and molecular theories and thermochemistry. Laboratory stresses techniques in chemical manipulations and data collection. For Chemical Technology students.
3 Class Hours, 3 Laboratory Hours
Prerequisite: High School Chemistry or CHM 102 Preparatory Chemistry

CHM 162 Chemistry **4 Credits**
A continuation of CHM 161 Chemistry. Chemical equilibrium, oxidation-reduction and electrochemistry, acids, bases and salts. Solubility product principle and coordination compounds. Laboratory work stresses qualitative and quantitative methods and techniques. For Chemical Technology students.
3 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 161 Chemistry

CHM 221 Organic Chemistry **3 Credits**
Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory covers techniques of separation and purification including gas chromatography, spectroscopy and synthesis. For Medical Laboratory Technology students.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 132 Chemistry

CHM 222 Organic Chemistry **3 Credits**
A continuation of CHM 221 Organic Chemistry including a study of the structure, reactivity and stereochemistry of important biomolecules. Laboratory includes multi step synthesis as well as selected experiments with biomolecules.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 221 Organic Chemistry

CHM 224 Instrumental Analysis **4 Credits**
Theory and laboratory instruction in electrochemical and optical methods of analytical chemistry, including potentiometry, polarography, amperometry, coulometry, conductimetry, radiochemistry. Ultraviolet-visible, infrared, atomic absorption and emission spectroscopy. Column, thin-layer and gas chromatography. For Medical Laboratory Technology students.
2 Class Hours, 6 Laboratory Hours
Prerequisite: CHM 132 Chemistry

CHM 245 Organic Chemistry **5 Credits**
A fundamental treatment of organic chemistry. Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separation, purification and isolation by classical methods as well as modern instrumental techniques. For Liberal Arts science majors and Engineering Science students with departmental approval.
3 Class Hours, 4 Laboratory Hours
Prerequisite: CHM 146 Chemistry or CHM 162 Chemistry

CHM 246 Organic Chemistry **5 Credits**
A continuation of CHM 245. Also includes such biomolecules as fats, carbohydrates, proteins and nucleic acids. The laboratory emphasizes multistep syntheses and qualitative organic analysis.
3 Class Hours, 4 Laboratory Hours
Prerequisite: CHM 245 Organic Chemistry

CHM 261 Organic Chemistry **5 Credits**
A systemic study of organic chemistry. Nomenclature, structures, reaction mechanisms, chemical properties, syntheses, effects on man and his environment. Laboratory experiments include separations, identifications, syntheses. For Chemical Technology students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: 1 year of college General Chemistry or CHM 162 Chemistry

CHM 262 Organic Chemistry **5 Credits**
An extension of CHM 261 Organic Chemistry, a systematic study of organic compounds. Spectroscopy, heterocyclic compounds and polymer chemistry. For Chemical Technology students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: CHM 261 Organic Chemistry

CHM 265 Instrumental Methods of Chemical Analysis **5 Credits**
Principles and techniques of modern quantitative analysis including Kjeldahl nitrogen analysis, chelatometry, ion-exchange, non-aqueous titrations, conductimetry, coulometry, electrogravimetry, polarography, amperometry, potentionmetry, radioisotope methodology. Statistical evaluation of data obtained by the various analytical methods. For Chemical Technology and Liberal Arts ''Chemical Model'' students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: 1 full year of college General Chemistry and MAT 142 Applied Calculus I and PHY 142 Physics

CHM 266 Instrumental Methods of Chemical Analysis **5 Credits**
Principles and techniques of modern instrumental methods of chemical analysis including ultraviolet, visible, infrared, nuclear magnetic resonance, atomic absorption, emission and mass spectroscopy. Column, thin-layer, gel permeation, gas and liquid-liquid chromatography. Chemical microscopy and differential thermal analysis. For Chemical Engineering Technology and Liberal Arts "Chemical Model" students.
3 Class Hours, 6 Laboratory Hours
Prerequisite: 1 full year of College General Chemistry and
MAT 142 Applied Calculus I and PHY 142 Physics

CHM 271 Chemical Processes **5 Credits**
Material and energy balances along with applied chemical and physical principles as they apply to chemical engineering. Emphasis on problem-solving in the classroom and engineering reports in the laboratory.
3 Class Hours, 4 Laboratory Hours
Prerequisite: 1 full year of General Chemistry and
MAT 142 Applied Calculus I and PHY 142 Physics

CHM 272 Chemical Processes **5 Credits**
Staged operations dealing with phase equilibrium. Graphical, analytical and computer methods are used to solve unit operations problems. The laboratory emphasizes engineering reports.
3 Class Hours, 4 Laboratory Hours
Prerequisite: CHM 271 Chemical Processes

CHM 290 Forensic Toxicology **3 Credits**
Application of the principles of forensic toxicology and the related forensic sciences within the scope of medical-legal investigation. Drug and poison analysis, examination of physical evidence and death investigation. Optional laboratory sessions will provide basic knowledge of forensic analysis utilizing microscopy, gas chromatography, thin-layer chromatography and spectroscopy.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CHM 120 Fundamental Chemistry or a semester
of General Chemistry or permission of instructor

CHM 291* Organic Chemistry I **3 Credits**
CHM 292*Organic Chemistry II **3 Credits**
Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separations and isolation by classical methods as well as modern instrumental techniques.
2 Class Hours, 3 Laboratory Hours each
Prerequisites: CHM 146 Chemistry for CHM 291
CHM 291 Organic Chemistry I for CHM 292

CHM 293* Analytical-Instrumental Chemistry I **3 Credits**
Classical analytical chemistry—sampling, statistics, gravimetric and volumetric analysis. Introduction to electrochemistry.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 146 Chemistry

CHM 294* Analytical-Instrumental Chemistry II **3 Credits**
Continuation of CHM 293 Analytical-Instrumental Chemistry I.
Additional electrochemistry and electrochemical techniques. Emphasis on spectroscopic and chromatographic methods. Visible, infrared and nuclear magnetic resonance spectroscopy. Gas, liquid, column and thin layer chromatography.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CHM 293 Analytical-Instrumental Chemistry I

CHM 299 Independent Study **2-4 Credits**
The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Departmental approval

CHILD CARE

Child Care (CDC) courses may not be used to satisfy the Social Science requirement.

The Child Care program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the program Coordinator of Child Care. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

MOST CHILD CARE COURSES (THOSE WITH CDC DESIGNATION) ARE OFFERED ONLY IN THE EVENING. FULL-TIME CHILD CARE STUDENTS MUST PLAN FOR BOTH DAY AND EVENING CLASSES.

CDC 100* Introduction to Education of Young Children **3 Credits**
An over-all view of nursery education and where it is going. Discussion of various philosophies and methods, programming, scheduling (what should go into scheduling a day for a pre-schooler and when). Focus on social, emotional and physical needs of young children and the importance of the "self concept" for both the child and the adult working with young children. Introduction to the college's Child Care program covering requirements, courses and career information. A required number of observations in pre-schools, nurseries and day care centers in the area, as well as a special laboratory project. Required of Child Care majors.
2 Class Hours, 2 Laboratory Hours

CDC 115* Music for Young Children **3 Credits**
How to develop the whole child through the use of music. This course will be of a practical application for the teacher. Various techniques and methods will be demonstrated through the use of songs, records, eurhythmics, rhythm instruments and creative activities. Class participation will be a vital part of this course. Students will be expected to apply these various methods and activities with young children.
3 Class Hours

CDC 120* Curriculum Development **3 Credits**
A pre-school curriculum for students planning to work in day-care centers and nursery schools. Emphasis on how art, language, math, creative play, science and outdoor play programs are used for the physical, social, emotional and mental development of the young child. Sharing and implementing ideas through special projects and construction and implementation of material related to specified areas. Students will be required to perform certain activities in a nursery school setting or with groups of children. Required of Child Care majors.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

*TAUGHT EVENINGS ONLY

CDC 140* Art for Young Children 3 Credits

In-depth coverage of art education as it contributes to the pre-school child's emotional, physical and psychological growth. Needs of pre-schoolers in this area and ways to foster creativity and skill acquisition. Materials and methods appropriate for this age. A laboratory experience working with pre-schoolers in art will be required.
2 Class Hours, 2 Laboratory Hours

CDC 150* Motor Development 3 Credits

Designed to give the student an understanding of normal motor development and how it relates to cognitive and perceptual development. Students will be exposed to programs and activities in motor development for young children. (Not offered in 1981-82 academic year).
3 Class Hours

CDC 160* Nutrition 3 Credits

Basics of good nutrition with emphasis on children. Ideas on planning and preparing snacks and meals and teaching good nutrition habits to children. Ideas on fitting nutrition into the nursery education curriculum and tying it to other subjects. Projects for practical application and experience in a nursery school setting. (Not offered in 1981-82 academic year. See DIA 100 on page 85 for acceptable nutrition course).
2 Class Hours, 2 Laboratory Hours

CDC 170* Practicum I 3 Credits

Designed to meet the needs of both the experienced and the inexperienced students. The inexperienced student is placed in a classroom setting conducive to the learning of desired teacher competencies, working with an experienced supervising teacher. Six hours per week for twelve weeks in this situation. Self-evaluation as well as being evaluated by others.
The experienced student is given some credit for work experience. For him/her, the practicum emphasizes self-evaluation according to classroom competencies. Both experienced and inexperienced students in group seminars with a college representative and meeting for individual consultation. Required of Child Care majors.
Prerequisite: 30 hours of counseled coursework
Taught evenings, field work days

CDC 180* Child Health and Safety 3 Credits

Designed to help students become aware of techniques for promoting general health care and safety standards at children's centers. Red Cross First Aid and Safety Course included. (Not offered 1981-82 academic year).
3 Class Hours

CDC 200* Social Psychology of Education 3 Credits

An investigation of the social and psychological factors that affect a child's learning processes. How the interaction of the unique characteristics of teachers, community, family and society contribute to the learning environment of the classroom. How learning outcomes can be efficiently achieved. Desirable conditions for learning. Required of Child Care majors.
2 Class Hours, 2 Laboratory Hours
Prerequisite: PSY 110 General Psychology

CDC 210* Special Problems in Children 3 Credits

How to understand and help the child with a special problem. Normal adjustment problems, learning disabilities, physical handicaps, retardation and the emotionally disturbed child. Techniques for the classroom teacher and places to get help. Actual student involvement with children who exhibit these problems. (Not offered in 1981-82 academic year).
2 Class Hours, 2 Laboratory Hours
Prerequisite: PSY 211 Child Development

CDC 220* Issues and Innovations in Early Childhood Education 3 Credits

An overview and insight into various philosophies and materials of education for young children, including Montessori, Piaget, open education (comparing English and American schools), affective education, behavior modification. The course aims to develop the competency of the student through practical application.
3 Class Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

CDC 230* Working with Parents in Nursery Programs 3 Credits

Designed to introduce the need for the parent's involvement in the education of the young child. Benefits for teachers, parents and children, when teachers and parents work closely together. Consideration of feelings of teachers and parents which help or hinder their working together. Various aspects of working with parents, such as home visiting, group parent meetings, newsletters and written communications, parent conferences and the use of volunteers in the classroom. Part of the course on a workshop basis, and students required to develop a special project to earn their third credit.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

CDC 250* Language in Early Childhood 3 Credits

A developmental study of language growth in young children and its influence on learning (cognitive abilities, social and behavioral concepts). Contemporary language theories and programs including a diagnostic approach to teaching language (communication skills, reading readiness and literature appreciation) in the pre-school. The student will be expected to spend a number of hours in a special project requiring observations of individual children and language arts programs.
3 Class Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

CDC 290* Practicum II 6 Credits

Designed to be flexible depending upon the needs and interests of the student. Project for experienced students based on the development of these needs and interests. Project must be approved. The experienced student to share ideas for his/her areas of strength in seminar situations.
For the inexperienced student, a classroom situation to conduct a self-evaluation of own competencies as a teacher, as well as being evaluated by others. Work with an experienced supervising teacher. The inexperienced student to spend 9 hours per week in a classroom situation for 12 weeks. Required of Child Care majors.
Prerequisite: CDC 170 Practicum I
Taught evenings, field work days

CDC 299 Independent Study in Child Care 1-2-3 Credits

An individual student project in child care beyond the scope or requirements of the courses offered by the department. Under the direction of a faculty member and approved by the program coordinator and department chairperson.No more than 3 credits may be acquired toward the Child Care degree in independent study projects.
1-2-3 Class Hours
Prerequisite: 6 Semester hours in Child Care courses

***TAUGHT EVENINGS ONLY**

CIVIL ENGINEERING TECHNOLOGY

CIV 110 Introduction to Civil Engineering Technology **1/2 Credit**
Introduction to the College and its policies, placement, transfer and study skills. Reasonable skill in the hand-held calculator to be developed. Outside speakers representing the various sectors of employment.
1 Class Hour

CIV 111 Surveying I **4 Credits**
Plane surveying including distance measurement, note keeping, leveling, angle measurement, care and use of instruments, stadia, record searching, deed descriptions, traversing, coordinates, area computation, map inking and sewer stakeout.
2 Class Hours, 6 Laboratory Hours
Corequisite: MAT 141 College Algebra and Trigonometry

CIV 112 Surveying II **2 Credits**
A continuation of CIV 111 Surveying I including mapping, field astronomy, precise leveling, triangulation, electronic measurements and public land surveys.
1 Class Hour, 3 Laboratory Hours
Prerequisite: CIV 111 Surveying I

CIV 115 Engineering Drawing **2 Credits**
Fundamentals of Engineering Drawing including care and use of instruments, linework, lettering, dimensioning, orthographic projection, sections, auxiliary views, detailing and an introduction to architectural drawing.
1 Class Hour, 3 Laboratory Hours

CIV 117 Architectural Drafting **2 Credits**
Fundamentals of architectural drafting including floor plans, elevations, sections, details, schedules, plot plans, plumbing layouts, electrical layouts. Emphasis on residential drawings.
1 Class Hour, 3 Laboratory Hours
Prerequisite: CIV 115 Engineering Drawing

CIV 124 Mechanics (Statics) **3 Credits**
Static force systems and equilibrium. Free body diagrams, trusses, graphic statics, spatial force systems, friction, centroids, moments of inertia.
3 Class Hours
Corequisite: PHY 141 Physics

CIV 155* Surveying **3 Credits**
Plane surveying including distance measurement, note keeping, compass surveying, leveling, angle measurement, care and use of instruments, stadia, traversing, coordinates, area computation, mapping and records.
2 Class Hours, 3 Laboratory Hours
Prerequisites: MAT 139 Algebra and MAT 140 Trigonometry or equivalent

CIV 156* Route Surveying **4 Credits**
Horizontal and vertical curves, spirals, sight distances and earthwork. Introduction to computer applications. Laboratory includes problem sessions using the college's computer to solve coordinate geometric problems.
3 Class Hours, 2 Laboratory Hours
Prerequisite: CIV 155 Surveying

CIV 159* Architectural Drafting I **3 Credits**
Development of working drawings for use in residential type construction. Plot plans, floor plans, elevations, details, mechanical and electrical layouts. Lectures to include construction materials, specifications and methods.
2 Class Hours, 3 Laboratory Hours

CIV 160* Architectural Drafting II **3 Credits**
A continuation of CIV 159 Architectural Drafting I. Development of working drawings for two-story and split-level residences.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 159 Architectural Drafting I

CIV 161* Architectural Drafting III **3 Credits**
Development of a set of working drawings for a small two-story commercial building including floor plans, elevations, sections, details, mechanical and electrical layouts, window and door schedules. Term project.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 160 Architectural Drafting II

CIV 163* Plain Concrete **2 Credits**
Cements, aggregates and plain concrete, including the testing of cements and aggregates, the design mixing, testing, placing, curing control and inspection of plain concrete. ASTM and AASHO standards.
2 Class Hours

CIV 212 Route Surveying and Photogrammetry **4 Credits**
Route Surveying: Simple and compound curves, vertical curves, spirals and earthwork. Selected topics in route selection, field technique and route design. Computer applications (COGO).
Photogrammetry: Basic optics, geometry of aerial photography, flight planning, ground control, stereoscopy and parallax, stereo pairs, mosaics and plotting instruments.
3 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 111 Surveying I

CIV 215 Strength of Materials **4 Credits**
Concepts of stress and strain. Simple stress, strain, torsion, shear and moment, stresses in beams, beam deflections, statically indeterminate beams, composite members, columns, combined stresses.
4 Class Hours
Prerequisite: CIV 124 Mechanics (Statics)

CIV 217 Materials Testing **3 Credits**
Composition, properties and testing of construction materials. Major emphasis on plain concrete. Aggregates, cements, admixtures, design and proportioning of concrete mixes, curing and inspection. Bituminous materials and ferrous metals, load and deformation measurements, behavior of materials under load, strain gauges.
2 Class Hours, 3 Laboratory Hours
Corequisite: CIV 215 Strength of Materials

CIV 224 Reinforced Concrete Design **3 Credits**
Fundamental theory and principles for the design of reinforced concrete. Design, analysis and detailing of rectangular beams. T-beams, beams reinforced for compression, columns and footings. Emphasis on ultimate strength design methods. Theory of prestressed concrete. An integrated design and detailing project.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 215 Strength of Materials

***TAUGHT EVENINGS ONLY**

CIV 226 Structural Steel Design **3 Credits**
Fundamental theory and principles necessary for design of simple steel structures. Design, investigation and detailing of beams, columns, tension and compression members and their connections. Composite beams. An integrated design and detailing project.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 215 Strength of Materials

CIV 228* Estimating and Construction Planning **3 Credits**
A systematic approach to estimating building project costs combined with a study of construction management and the critical path method of scheduling.
2 Class Hours, 2 Laboratory Hours

CIV 231 Estimating and Construction Planning **3 Credits**
A systematic approach to estimating building project costs combined with a study of the critical path method of scheduling.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 117 Architectural Drafting

CIV 235 Hydraulics **4 Credits**
Hydraulics including properties of fluids, hydrostatics, fluid motion in or through orifices, nozzles, pipes, weirs, open channels, hydraulic machinery, pipe branches and networks.
3 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 124 Mechanics (Statics)

CIV 236 Construction Management **3 Credits**
Principles of construction management, specification writing, with emphasis on planning, building, scheduling and controlling a project.
3 Class Hours

CIV 238 Architectural Design and Building Materials **3 Credits**
Design and detailing of commercial buildings including site considerations, space requirements, layout planning, building materials, manufacturing processes, construction methods, working drawings. Emphasis on individual creativity. Semester project.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 117 Architectural Drafting I

CIV 240 Soil Mechanics **3 Credits**
Soil origin and nature, soil density, test borings, gradation compaction, soil water, frost in soil, classification, stress, shear strength, bearing capacity, piles. The laboratory covers ASTM and AASHO specifications used in classifying and predicting behavior of soils.
2 Class Hours, 3 Laboratory Hours
Prerequisite: CIV 215 Strength of Materials

CIV 244 Environmental Sanitation **3 Credits**
Population studies, water supply, transportation, distribution and treatment. Sewage collection and treatment, unit operations. Communicable diseases, biological and chemical aspects of water and sewage. Refuse sanitation, air pollution, industrial wastes, radioactivity.
3 Class Hours
Prerequisite: CIV 235 Hydraulics

***TAUGHT EVENINGS ONLY**

CIV 251* Elementary Structural Analysis I **3 Credits**
Introduction of structural analysis. Reactions, shear and moment diagrams, truss analysis, graphic statics, influence lines, moving loads, approximate analysis of indeterminate structures, deflections.
3 Class Hours
Prerequisite: MET 235 or CIV 215 Strength of Materials

CIV 252* Elementary Structural Analysis II **3 Credits**
Continuation of CIV 251 Elementary Structural Analysis I. Deflections, indeterminate beams and frames, Castigliano's theorems, three moment equations, slope deflections, moment distribution, column analogy and plastic analysis. Computer applications.
3 Class Hours
Prerequisite: CIV 251 Elementary Structural Analysis I

CIV 255* Reinforced Concrete Design **3 Credits**
Fundamental behavior of reinforced concrete. Design and analysis of rectangular beams, T-beams, beams reinforced for compression, columns and footings. Major emphasis on ultimate strength design methods.
3 Class Hours
Prerequisite: MET 235 or CIV 215 Strength of Materials

CIV 257* Structural Steel Design **3 Credits**
Fundamental theory and principles necessary for design of simple steel structures. Design and analysis of beams, columns, tension members, compression members and their connections. Composite beams, framing systems, loads and forces.
3 Class Hours
Prerequisite: MET 235 or CIV 215 Strength of Materials

CIV 260* Environmental Sanitation **4 Credits**
Communicable diseases, water requirements and waste volumes, water supplies, transportation and distribution of water, chemical and biological aspects. Water treatment, waste water treatment including biological and physical treatments. Emphasis on municipal systems. Individual systems.
4 Class Hours

CIV 262* Soil Mechanics **4 Credits**
Origin and nature of soil, soil physics, sampling soil water, flow nets and seepage forces, classification, frost action, stability, retaining walls, piles and underground conduits.
4 Class Hours
Prerequisite: MET 235 or CIV 215 Strength of Materials or permission of instructor.

CIV 266* Hydraulics **3 Credits**
A basic course in theory and practical applications of hydraulics. Properties of fluids, measurements, hydrostatics, dynamic problems of both pipe and open channel flow. Application and limitations of some of the design aids in common use.
3 Class Hours

CIV 268* Engineering Economics **2 Credits**
Use of compound interest in financing and in determining engineering cost comparisons. Introduction to depreciation methods. Illustrate cases and problems (personal and engineering) including New York State Professional Engineering Examination problems.
2 Class Hours
Prerequisite: MAT 139 Algebra or equivalent

CIV 270* Highway Design **3 Credits**

Phases of highway design in sequence from initiation to final design. Classification of highways, criteria and controls for both horizontal and vertical alignment, typical section, cost estimate, and other features associated with design. A broad review of the scope and content of final plans, specifications and engineers estimate.
3 Class Hours
Prerequisite: CIV 155 Surveying and CIV 156 Route Surveying or permission of instructor.

COMMUNICATIONS

COM 110 Introduction to Photography **3 Credits**

Basics of camera design and operation, plus the fundamentals of photographic visualization and composition: line, form, color, light, shadow. Darkroom procedures, film processing, basic printmaking, selective printing techniques. (Students must have their own 35mm single lens reflex camera and should expect to pay for their own photographic materials.)
2 Class Hours, 2 Laboratory Hours

COM 120 Introduction to Audio Video Production **3 Credits**

Theory and practice. Emphasis on actual experience with a variety of equipment: microphones, reel to reel and audio cassette tape recorders, black and white and color videotape players and recorders, portable videotape equipment.
2 Class Hours, 2 Laboratory Hours

See ENG 200 Media and Culture on page 90.

COMPUTER STUDIES COURSES

The CST courses are designed to acquaint students with the computer and its capabilities and to provide opportunities for ''hands-on'' experience.

Because many college programs and industries depend on the computer to process data rapidly, both transfer-minded students and those preparing for immediate employment after graduation are introduced to the capabilities of the computer.

The College has a large computer system capable of supporting both the College's administrative and academic computing concurrently. The batch computing facilities and 44 time-sharing terminals are available to support the academic pursuits of all students.

CST 100 BASIC **1 Credit**

Arithmetic expressions, conditional transfers, conversational programming, loops, subscripted variables, functions and subroutines. Conforms to American National Standard for Minimal BASIC. May not be taken for credit if student takes CST 110 Introduction to Data Processing.
(Half semester)
1 Class Hour, 2 Laboratory Hours

CST 110 Introduction to Data Processing **3 Credits**

Historical development and current influences exerted on our society by the computer. Basic computer concepts including data entry, hardware and software components that comprise a computer system. Introduction to a computer programming language, with emphasis on logical problem definition and documentation using a time sharing system.
3 Class Hours

CST 111 Introduction to Computer Studies **3 Credits**

Introduction to the concepts of computer science, data manipulation and the language-independent development of problem solutions. Efficient use of system utilities, text editors and programming tools. Documentation. Coding and number systems. Boolean algebra. Overview of computer hardware and software. Specific applications and how they are accomplished.
3 Class Hours
Recommended Corequisite: CST 115 Problem Solving with Pascal

CST 112 Computer Logic **3 Credits**

Comprehensive coverage of basic logic gates, computer arithmetic, Boolean Algebra and Karnaugh Mapping, with a view toward circuit simplification. Adders, subtractors, multiplexers, code converters, asynchronous and synchronous counters presented in detail as basic computer building blocks. Interfacing between analog-digital and digital-analog covered as the method of communicating with the computer. Laboratory exercises utilize TTL and CMOS logic chips to reinforce material presented in lectures.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 110 Introduction to Data Processing or CST 111 Introduction to Computer Studies

CST 115 Problem Solving with Pascal **3 Credits**

Introduction to problem solving by computer using the structured programming language Pascal. Programming steps include problem definition, outline of solution, selection of algorithms, coding, debugging, testing and validating, documenting, program maintenance. Pascal syntax includes scalar, structured data types, assignment statements and arithmetic expressions, control statements, input and output statements, functions and procedures. Examples will introduce the basic algorithms used in computer science.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 003B Basic Math Review or equivalent
Corequisite: CST 111 Introduction to Computer Studies

CST 116 RPG II **3 Credits**

Fundamentals of RPG (Report Program Generator) programming language. Beginning language for small business installations, especially those converting manual or unit record systems to computer. Explanation of specification sheets, internal logic, branching and table look-up operations.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 110 Introduction to Data Processing or CST 111 Introduction to Computer Studies

CST 118 Computer Programming—COBOL **3 Credits**

Fundamentals of ANSI COBOL applied to solutions of commercially oriented problems. A number of problems assigned for execution on the computer.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 110 Introduction to Data Processing or CST 111 Introduction to Computer Studies

CST 120 Computer Programming—FORTRAN **3 Credits**

Programming solutions to business problems utilizing FORTRAN language. Emphasis on documentation procedures, techniques of programming and error analysis, simulation of business data processing in a laboratory environment. For business and data processing students.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 110 Introduction to Data Processing or CST 111 Introduction to Computer Studies

***TAUGHT EVENINGS ONLY**

CST 122 Scientific Computer Programming —FORTRAN 3 Credits

Introduction to problem solving techniques using FORTRAN including development of an algorithm, flow charting, program writing, debugging, storage and execution, input and output, loop techniques, array manipulation, file control and control of on-line equipment, structured programming, terminal and batch operations. Material to be covered taken from student's area of study. For engineering technology and data processing students.

2 Class Hours, 2 Laboratory Hours
Prerequisite: Working knowledge of algebra and trigonometry

CST 124 Computer Programming for Engineers 3 Credits

FORTRAN programming with application in engineering, calculus and statistics. Time sharing, program encoding and decoding. Programming topics include FORTRAN syntax, looping, data representation, function and subroutines, multi-dimensional arrays. Simulation of engineering processes and graphical displays. For Engineering Science and Computer Science students.

2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 161 Introduction to Calculus or its equivalent

CST 126 Assembly Programming—BAL 3 Credits

Fundamentals of assembly level programming using BAL. Emphasis on the use of assembly language in solving a number of programming problems.

2 Class Hours, 2 Laboratory Hours
Prerequisite: Two 3-credit high-level programming courses

CST 130 PL/1 3 Credits

Introduction to PL/1, a general purpose language capable of conveniently handling both scientific and business problems. Basic program elements, nesting, looping, string techniques, arrays and structures, procedures, input/output and formatting.

2 Class Hours, 2 Laboratory Hours
Prerequisite: One programming language or instructor's permission

CST 150 APL 3 Credits

An introduction to the powerful array handling computer language APL. Operations on scalars, vectors, matrices, arrays of any size or shape. Primitive and user defined functions. Editing and workspace management. Business and scientific applications.

2 Class Hours, 2 Laboratory Hours
Prerequisite: Two 3-credit hour programming language courses and MAT 139 Algebra or equivalent

CST 200 Systems Analysis 3 Credits

Principles of systems analysis, problem solving and implementation of computer systems including the importance of standards, procedures, security and documentation. Each student to complete a programming project utilizing his/her knowledge from this and other Computer Studies courses. A team case study approach and guest speeches provide the format of work sessions.

2 Class Hours, 2 Laboratory Hours
Prerequisite: One programming language or instructor's permission

CST 202 Data Structures 3 Credits

Static and dynamic data structures. Choice of proper structure to organize data. Arrays, records, files, linked lists, trees, stacks, queues and directed graphs with applications. Programming will be done in Pascal.

2 Class Hours, 2 Laboratory Hours
Prerequisites: CST 115 Problem Solving with Pascal and MAT 154 Discrete Mathematics II or equivalent mathematical preparation

CST 205 Advanced FORTRAN with Graphics 3 Credits

A further study of the proper way to write FORTRAN programs. Use of logical structures to define complicated systems, use of subroutines, simulation programming, file structures, queues, searching, sorting. Emphasis on use of school's plotter and graphics terminals. Class project involving graphics, statistics.

2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 120 or CST 122 Computer Programming—FORTRAN or CST 124 Computer Programming for Engineers

CST 217 Advanced RPG II 3 Credits

Multiple content breaks, processing within limits, exception output, arrays, tables and sorts. Special emphasis on sequential, indexed and direct disk file techniques. Laboratory exercises business oriented and run by students in a hands-on environment. Techniques taught are applicable to an actual business environment.

2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 116 RPG II

CST 218 Advanced COBOL 3 Credits

A second course in the use of the COBOL language as a means of implementing computerized solutions to data processing problems. Batch and interactive processing, various file access techniques, use of advanced language statements and of various utilities available to the COBOL programmer.

2 Class Hours, 2 Laboratory Hours
Prerequisite: CST 118 COBOL

CST 220 Introduction to Microprocessors 3 Credits

Digital codes, microprocessor definitions and terms, flow charting, branching, flags, indexing and extended addressing, stack operations, subroutines and system interrupts. Such interfacing concepts as rams, clocks, input and output, buses, tri-states. Extensive use of the 6800 microprocessor.

2 Class Hours, 2 Laboratory Hours
Prerequisites: CST 112 Computer Logic and High Level Programming Language

CST 222 Topics in Computer Systems 3 Credits

Functions of the hardware components of a computer system and the operating system. Addressing, bus and channel devices, virtual memory, scheduling, queueing, spooling, multi-programming, real-time processing, timesharing. Communications systems, various communications techniques and the hardware and software involved.

3 Class Hours
Prerequisite: CST 205 Advanced FORTRAN

CST 230 Assembly for Microprocessors 3 Credits

Assembly language for standard microprocessors.

2 Class Hours, 2 Laboratory Hours
Prerequisites: CST 126 Assembly Programming—BAL, CST 220 Introduction to Microprocessors or one 3-credit high level programming language

CRIMINAL JUSTICE

Criminal Justice (CRJ) courses may not be used to satisfy the Social Science requirement.

The Criminal Justice program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the Program Coordinator of Criminal Justice. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

CRJ 101 Introduction to Criminal Justice — 3 Credits

Overview of the major components of the criminal justice system—law enforcement, prosecution, trial courts and corrections. A systems approach is utilized with an emphasis on the structure, functions and interdependence of these and other criminal justice system components. (Formerly CRJ 100).
3 Class Hours

THE FOLLOWING CRIMINAL JUSTICE COURSES ARE TAUGHT IN THE EVENING ONLY

CRJ 105 Introduction to Corrections — 3 Credits

Overview of the corrections components of the criminal justice system, tracing the history of corrections in the United States. Relationships and interdependencies of corrections with the court and law enforcement components of the criminal justice systems and a discussion of the theoretical basis for the four major types of correctional models. (Formerly CRJ 240).
3 Class Hours

CRJ 115 Juvenile Justice System — 3 Credits

Overview of the juvenile justice system, including the history, process, status and philosophy of the juvenile court. Law enforcement handling of juveniles, various theories of delinquency causation, correctional programs and alternative methods of dealing with juvenile offenders. (Formerly CRJ 250).
3 Class Hours

CRJ 125 Penal Law — 3 Credits

Essential elements of the various crimes under the New York State Penal Law. The concepts of culpability and criminal defenses recognized under the New York State Penal Law as they relate to murder, rape, robbery, burglary, arson, assault, drug offenses, disorderly conduct and harassment. (Formerly CRJ 210).
3 Class Hours

CRJ 130 Introduction to Security — 3 Credits

Organization and management of the security function in industry, business, government and institutions. The protection of personnel, facilities and other assets, as well as administrative, legal and technical problems of loss prevention and control. (Formerly CRJ 260).
3 Class Hours

CRJ 212 Criminal Procedure and Constitutional Law — 3 Credits

The right to counsel, search and seizure, confessions, lineups, electronic surveillance, probation and parole. (Formerly CRJ 120).
3 Class Hours
Prerequisite: CRJ 101 Introduction to Criminal Justice

CRJ 215 Police Administration — 3 Credits

Fundamentals of organization, supervision and over-all management of police and civilian personnel. Designed to supply a background for the student in dealing with the complexities involved in the management aspects of various police agencies. (Formerly CRJ 110).
3 Class Hours
Prerequisite: CRJ 101 Introduction to Criminal Justice

CRJ 220 Evidence for Law Enforcement — 3 Credits

A practical examination of the law of evidence, as it pertains to the function of persons engaged in law enforcement. Fundamental concepts and terminology, due process of obtaining evidence in criminal investigations, search and seizure, confessions, identification to the process of presenting evidence at hearings and trials of criminal cases (scientific evidence, direct and cross examination of witnesses).
3 Class Hours
Prerequisites: CRJ 101 Introduction to Criminal Justice and CRJ 125 Penal Law.

CRJ 230 Criminal Investigation — 3 Credits

Basic principles of investigation as they relate to the collection, preservation, identification and examination of physical evidence. Techniques for locating and interviewing witnesses and for interrogating suspects. Common myths associated with detective work.
3 Class Hours
Prerequisites: CRJ 101 Introduction to Criminal Justice and CRJ 125 Penal Law

CRJ 235 Understanding and Changing Criminal Behavior — 3 Credits

In-depth examination of the various theories utilized in explaining and dealing with criminal behavior. Theories emanating from the fields of psychology, sociology and biology provide the basis of this examination. A seminar approach. Participation of students will be expected to document and report their activities.
3 Class Hours
Prerequisites: CRJ 101 Introduction to Criminal Justice and CRJ 105 Introduction to Corrections.

CRJ 255 Special Topics in Criminal Justice — 1-3 Credits

The specific area to be covered will be based upon identified needs and interests of criminal justice students. This course also provides a forum for professional individuals in the criminal justice field with a particular expertise to share their knowledge and skills with students.
1-3 Class Hours
Prerequisites: CRJ 101 Introduction to Criminal Justice and 2 other CRJ courses.

CRJ 299 Independent Study — 1-3 Credits

An individual student project concerned with advanced level work beyond the scope or breadth of regular courses. A specific area or topic is investigated under the direction of a faculty member. Must be approved by department chairperson.
Prerequisite: CRJ 101 Introduction to Criminal Justice and 6 credits in CRJ courses.

DENTAL HYGIENE

DEN 101 Dental Hygiene I **4 Credits**
Contemporary practice of dental hygiene and factors affecting such practice. Principles of instrumentation, root planning, polishing in pre-clinical environment. Clinical experience in the basic techniques of dental hygiene care.
2 Class Hours, 6 Laboratory Hours

DEN 102 Dental Hygiene II **6 Credits**
Continuation of DEN 101 Dental Hygiene I. Clinical experience in the theory, techniques, procedures of dental hygiene care including ethics, jurisprudence and emergency dental procedures.
4 Class Hours, 8 Laboratory Hours
Prerequisites: DEN 101 Dental Hygiene I and BIO 131 Human Biology I and DEN 103 Oral Anatomy and Physiology

DEN 103 Oral Anatomy and Physiology **4 Credits**
Normal structure and function of the oral cavity (microscopic and gross). Laboratory work provides experience with traditional approaches to oral anatomy and physiology.
2 Class Hours, 4 Laboratory Hours

DEN 106 Clinical Dental Radiography **2 Credits**
Nature and behavior of radiation, biological benefits and hazards, maintenance of radiation hygiene, use and care of the X-ray machine. Intraoral and extraoral dental radiographic techniques performed on manikins and patients, film processing and mounting, radiographic interpretation.
1 Class Hour, 2 Laboratory Hours
Prerequisites: DEN 101 Dental Hygiene I and DEN 103 Oral Anatomy and Physiology and BIO 131 Human Biology I

DEN 201 Dental Hygiene III **5 Credits**
Continuation of DEN 102 Dental Hygiene II. Integration of theory with clinical experience in various oral hygiene preventative procedures, selected expanded duties and essential business aspects of a dental office.
2 Class Hours, 12 Laboratory Hours
Prerequisites: DEN 102 Dental Hygiene II, DEN 104 Nutrition, DEN 106 Clinical Dental Radiography, and BIO 160 Microbiology

DEN 202 Dental Hygiene IV **6 Credits**
Continuation of DEN 201 Dental Hygiene III. Clinical experience in all phases of dental hygiene care. Emphasis on planning and execution of the total treatment plan concept.
2 Class Hours, 12 Laboratory Hours
Prerequisites: DEN 201 Dental Hygiene III, DEN 204 General and Oral Pathology and DEN 205 Periodontology

DEN 204 General and Oral Pathology **3 Credits**
Broad picture of the disease process through the study of common general diseases, their causes, results and treatment. Emphasis on the principles of inflammation, healing and repair, oral diseases, their causes, recognition and treatment.
3 Class Hours
Prerequisites: DEN 102 Dental Hygiene II, DEN 104 Nutrition, BIO 160 Microbiology and BIO 132 Human Biology II

DEN 205 Periodontology **2 Credits**
Pathology of the periodontium. Emphasis on recognition and treatment of the periodontal patient within the scope of the dental hygienist.
2 Class Hours
Prerequisites: DEN 102 Dental Hygiene II, DEN 103 Oral Anatomy and Physiology, DEN 106 Clinical Dental Radiography, BIO 132 Human Biology II and BIO 160 Microbiology

DEN 206 Dental Pharmacology **2 Credits**
Pharmacology as it affects the clinical practice of dental hygiene and dentistry. Drugs commonly used in dentistry and correct methods for their use. Emphasis on pharmacological aspects of anesthesia.
2 Class Hours
Prerequisites: BIO 132 Human Biology II and BIO 160 Microbiology

DEN 209 Nutrition **3 Credits**
Nutrients necessary for healthy functioning of human beings in various stages of the life cycle — functions, sources, conditions resulting from excessive and inadequate intake of each nutrient. Composition of foods from various plant and animal sources and their use in planning an adequate and balanced diet. (Formerly DEN 105.)
3 Class Hours
Prerequisite: DEN 102 Dental Hygiene II

DEN 210 Dental Materials **3 Credits**
Composition, chemical and physical properties and use of materials used in the dental laboratory and operatory. Laboratory sessions will provide experience in performing common dental laboratory procedures and background for clinical application of expanded functions.
2 Class Hours, 2 Laboratory Hours
Prerequisite: DEN 201 Dental Hygiene III

DEN 213 Public Health **3 Credits**
Principal responsibilities and functions of public health. Tools for measuring a population's needs and demands and how they are met. Community public and dental health agencies and programs. Research relating to dental diseases. Roles and opportunities for dental hygiene in public health. A special project, on-campus or off, must be completed.
2 Class Hours, 2 Laboratory Hour
Prerequisite: DEN 102 Dental Hygiene II

DEN 214 Dental Specialties **2 Credits**
Integration, comparison and study of all the special fields of dentistry including endodontics, periodontics, oral surgery, public health, prostodontics, pedodontics and orthodontics.
2 Class Hours
Prerequisite: DEN 201 Dental Hygiene III

DIETETIC ASSISTANT

DIA 100* Introduction to Principles of Basic Nutrition **3 Credits**
Designed to develop an awareness and appreciation of the importance and scope of the science of nutrition. Factors contributing to individual differences in food and eating patterns, nutritional needs at various stages of life, functions and sources of major nutrients, sociological impacts of nutrition. May be used as Child Care elective in AAS program.
3 Class Hours

***TAUGHT EVENINGS ONLY**

To take the following courses, students must be employed in the field so that they can schedule directed practice hours.

DIA 101* Nutrition **3 Credits**
The social, cultural, psychological and physiological functions of food. Nutrition care throughout the life cycle. Special consideration given to modifications of the basic diet to meet the needs of the resident in health care facilities. Techniques of interviewing and medical ethics.
2 Class Hours, 4 Directed Practice

DIA 102* Institution Food Preparation **3 Credits**
Principles of food preparation, standardization of recipes, menu structure and planning. Serving, merchandising and promotion of food items. Various food preparation equipment and techniques. Sanitary food handling and holding practices emphasized.
2 Class Hours, 4 Directed Hours

DIA 201* Food Management Systems **3 Credits**
An introduction to the health field and its inter-relationships. The concept of management including the principles of organizing, evaluation, and the decision making process. Control through specification, purchasing, inventory and cost analysis. Equipment, housekeeping, sanitation and safety practices.
2 Class Hours, 4 Directed Practice

DIA 202* Personnel Management **3 Credits**
Leadership and supervisory techniques. Implications of authority and responsibilities. Understanding and communicating with workers and co-workers. Employee recruitment, training and evaluation. Morale and labor relations. Analysis of duties and work simplification performance and motivation.
2 Class Hours, 4 Directed Practice

ECONOMICS

ECO 101 Consumer Economics **3 Credits**
Institutions and forces directly affecting the consumer: consumer income and expenditure patterns, personal finance, credit and tax problems. Personal investment alternatives. Impact of the consumer movement on the individual and society.
3 Class Hours

ECO 104 Labor Economics and American Industry **3 Credits**
Interaction among business, labor and government. Analysis of the causes of unemployment and income inequality. Connection between productivity, wages, prices and employment and application of anti-trust and labor laws to firms and unions.
3 Class Hours

ECO 107 Health Economics and Law **3 Credits**
Economic aspects of health care in America. Demand for medical services, factors which influence its cost, supply and adequate delivery. Alternate ways of solving problems posed. The role of government, social and economic policy in the health care field. Emphasis on the application of micro-economics to health care issues. Medical law as it affects those in medically related fields. Students who have taken ECO 110 Introduction to Micro-Economics must have the permission of the instructor to enroll in this course.
3 Class Hours

ECO 110 Introduction to Micro-Economics **3 Credits**
Supply, demand and the market system as they relate to contemporary economic problems including poverty, energy, the environment and urban decay. The allocation of resources under conditions of competition and various degrees of monopoly. Rationale behind anti-trust laws and other governmental attempts to control monopoly power and promote economic well-being. Comparative economic systems.
3 Class Hours

ECO 111 Introduction to Macro-Economics **3 Credits**
Causes of unemployment and inflation and the government's efforts to control them. Problems of economic growth as they relate to our economy and to other countries, developed and underdeveloped. International trade and finance problems.
3 Class Hours

ECO 120 American Economic History **3 Credits**
A topical approach to the economic impetus behind the growth and development of the United States. Colonial heritage and the market system, population and natural resources, agriculture, transportation, labor, business, the capital market and the influence of government. Understanding today's economic problems by observing how they developed historically.
3 Class Hours

ECO 140 Economics of Urban Problems **3 Credits**
Application of economic analysis to urban problems, an understanding of the economic forces that affect housing, transportation, poverty, crime, land use, the financing of urban services and the urban future.
3 Class Hours

ECO 253 Money and Banking **3 Credits**
An examination of money, credit and financial institutions, emphasizing how the monetary system influences economic activity. Nature and functions of money, the commercial banking system and other financial institutions, the roles of the Federal Reserve System and the Treasury, monetary policy and international money problems.
3 Class Hours
Prerequisite: ECO 111 Introduction to Macro-Economics

ECO 299 Independent Study **1-3 Credits**
An individual student project in economics which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: 3 semester hours in economics

ELECTRICAL ENGINEERING TECHNOLOGY

EET 111 Electrical Construction Laboratory I **2 Credits**
Basic knowledge about today's electrical equipment. Experience in the installation, fabrication and maintenance of electrical equipment by means of "hands-on" approach. Shop safety and the National Electrical Code. Basic residential and commercial wiring procedures, basic measuring techniques, fundamentals of basic machine operations.
1 Class Hour, 3 Laboratory Hours

***TAUGHT EVENINGS ONLY**

EET 112 Electrical Construction Laboratory II **1 Credit**
Advanced wiring methods, fractional horsepower motor and appliance troubleshooting, introduction to residential and commercial lighting and power layout-design.
3 Laboratory Hours
Prerequisite: EET 111 Electrical Construction Laboratory I

EET 121 Electrical Circuits **5 Credits**
Fundamentals of electrical circuits and application of circuit laws, theorems and measuring techniques to both d-c and a-c single and polyphase circuits.
4 Class Hours, 3 Laboratory Hours

EET 125* Circuits I **3 Credits**
D-c circuits, including loop and nodal analysis, superposition, Thevenin's and Norton's theorems, RL and RC time constants.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 139 Algebra or equivalent
Student may take MAT 139 concurrently with this course

EET 126* Circuits II **3 Credits**
A continuation of the study of circuits concepts related to single and three-phase alternating current. Resonance, network analysis, power.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 140 Trigonometry or equivalent and EET 125 Circuits I
Student may take MAT 140 concurrently with this course

EET 130 Engineering Drawing **1 Credit**
Principles of projection. Development of drafting skills, lettering and proper line construction. Dimensioning and tolerancing, with an emphasis on shop processes. Use of auxiliary views and sectioning. Preparation of assembly drawings, materials lists, schematic and wiring diagrams.
3 Laboratory Hours

EET 150 Electronics I **5 Credits**
Principles of resonance, inductive coupling, transformers, RL and RC time constants, rectification. Characteristics of electronic devices including diodes, bipolar transistors, field effect transistors, tubes, unijunction transistors, thyristors and special purpose devices. Biasing techniques, load line analysis, rule-of-thumb design, hybrid parameters. Computer used to solve problems.
4 Class Hours, 3 Laboratory Hours
Prerequisites: MAT 141 College Algebra and Trigonometry and CST 122 Scientific Computer Programming—FORTRAN and EET 121 Electrical Circuits

EET 162 Computer Aided Network Analysis **3 Credits**
Computer analysis of complex electrical and electronic networks by application of network theorems. Use of a second computer language (Basic) to display the response of two port networks. Use of the computer to apply matrix methods to the analysis of complex circuits and the solution of network problems.
3 Class Hours
Prerequisites: CST 122 Scientific Computer Programming—FORTRAN and EET 121 Electrical Circuits and MAT 141 College Algebra and Trigonometry

EET 181 Installation and Maintenance of Electric Motors **2 Credits**
Basic understanding and application of electrical motors to modern industrial machines. D-c motors, single phase and polyphase alternating current motors. Emphasis on factors contributing to appropriate motor selection for newly designed machines. Motor control systems. Installation and routine maintenance.
2 Class Hours

EET 185 Electricity **3 Credits**
Practical applications of electrical concepts as applied to basic d-c and a-c circuitry, motors, alternators, energy sources and protection equipment. Laboratory work includes demonstration of concepts by students; operation of common electrical measuring instruments such as multimeters, oscilloscopes, wattmeters and bridges; operation of basic a-c motor starters.
2 Class Hours, 3 Laboratory Hours
Prerequisites: PHY 142 Physics (Electricity and Magnetism) and MAT 141 College Algebra and Trigonometry

EET 186 Electronics **3 Credits**
Practical applications of electronic concepts as applied to solid state devices, amplifiers, power supplies, oscillators, timers, multivibrators and basic logic devices and transducers. Laboratory work includes practical applications of concepts by students, operation of common electronic instruments such as oscilloscope, curve tracer, function generator and counter.
2 Class Hours, 3 Laboratory Hours
Prerequisite: EET 185 Electricity

EET 230 Electronic Design and Fabrication **1 Credit**
Selection, package design and construction of an electronic project and preparation of related drawings. Use of various manufacturing processes to fabricate the project. Use of industrial standard drafting practices to properly describe the operations. Chassis layout, printed circuit board design and etch, wiring, soldering, enclosure.
3 Laboratory Hours
Prerequisites: EET 130 Engineering Drawing and EET 251 Electronics II and EET 112 Electrical Construction Laboratory II

EET 235* Electrical and Electronics Drawing **2 Credits**
Graphic representation of circuitry related to the electrical and electronics fields. Use of industrial standards and symbolism to draw electronic, schematic and wiring diagrams, printed circuit layout and electronics assemblies. Construction of one-line power distribution diagrams, industrial motor control diagrams and a commercial lighting layout.
1 Class Hour, 2 Laboratory Hours
Prerequisites: MET 113 Engineering Drawing I and EET 255 Electronics I

EET 241 Electrical Machines and Controls I **4 Credits**
Theory, operation and application of d-c machines, and their magnetic and solid state control. Theory and application of single and polyphase power transformers and rectifiers.
3 Class Hours, 3 Laboratory Hours
Prerequisite: EET 150 Electronics I

EET 242 Electrical Machines and Controls II **5 Credits**
Generation and use of three-phase power. Theory, operation and application of a-c motors and controls. Principles of open and closed loop systems. Theory, operation, application of industrial equipment used in control systems.
4 Class Hours, 3 Laboratory Hours
Prerequisite: EET 241 Electrical Machines and Controls I

EET 245* Electrical Machines **4 Credits**
D-c and a-c machine theory, application and control. Single phase and polyphase transformers, solid state rectification.
3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 126 Circuits II

***TAUGHT EVENINGS ONLY**

EET 251 Electronics II **4 Credits**
Basic configurations of active devices, equivalent circuits, performance predictions, frequency response, Bode plots, negative feedback, operational amplifiers, integrated circuits, active filters.
3 Class Hours, 3 Laboratory Hours
Prerequisite: EET 150 Electronics I

EET 252 Electronics III **4 Credits**
Passive and active waveshaping, non-sinusoidal oscillators, sinusoidal oscillators, large signal amplifiers, regulated power supplies, elements of communications systems.
3 Class Hours, 3 Laboratory Hours
Prerequisite: EET 251 Electronics II

EET 255* Electronics I **4 Credits**
Principles of amplification, rectification, filtering and regulation. Characteristics of electronic devices including diodes, bipolar transistors, field effect transistors, operational amplifiers, tubes, unijunction transistors, thyristors and special purpose devices. Biasing techniques, load line analysis and equivalent circuits.
3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 126 Circuits II

EET 256* Electronics II **4 Credits**
Basic configurations of active devices, equivalent circuits, performance predictions, frequency response, Bode plots, negative feedback, operational amplifiers, integrated circuits, active filters.
3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 255 Electronics I

EET 257* Electronics III **4 Credits**
Passive and active waveshaping, non-sinusoidal oscillators, sinusoidal oscillators, large signal amplifiers, regulated power supplies, timers, phase locked loops and elements of communications systems.
3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 256 Electronics II

EET 267 Digital Electronics and Microprocessors I **4 Credits**
Use of electronic circuitry to solve mathematical problems. Digital computer hardware and number systems. Building blocks, sub-system and system operations. Construction and use of monolithic integrated circuits including applications and limitations of available families. Appropriate laboratory exercises provide hands-on experience in the application of digital circuits.
3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 150 Electronics I or EET 255 Electronics I

EET 268* Digital Electronics and Microprocessors II **4 Credits**
Use of a modern microcomputer in real time control applications, such as testing complex circuitry using microcomputers, display systems, A to D conversions, timing. Troubleshooting microcomputers, internal operations, and recent developments. Programming in assembly language with an introduction to HLL emphasized as a tool for interfacing. Laboratory exercises provide experience on many different systems with different end applications.
3 Class Hours, 2 Laboratory Hours
Prerequisite: EET 267 Digital Electronics and Microprocessors I

***TAUGHT EVENINGS ONLY**

EET 299 Independent Study **2-4 Credits**
The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a job-related assignment. Any independent study project is based on instructor availability.
Prerequisite: Departmental Approval

ENGINEERING

EGR 110 Introduction to Technologies **1/2 Credit**
Introduction to the college and its policies, placement, transfer and study skills. Reasonable proficiency in the use of the hand calculator is developed. For engineering technology freshmen.
1 Class Hour

EGR 130* Professional Engineers Review Course **5 Credits**
For those qualified who plan to take the New York State Licensing Examination. New requirements for the National Examination. Physics, statics, dynamics, mechanics of materials, electrical theory, economic analysis, mathematics, fluid mechanics, thermodynamics, systems analysis, computer science. Chemical, civil, electrical and mechanical engineering problems. This course can also serve as a guide for self-study for any engineer who wishes to review the broad subject areas in engineering. This is a 30-week course.
2½ Laboratory Hours

EGR 281 Mechanics (Statics) **3 Credits**
Fundamental concepts of the statics of rigid bodies developed by using a vector analysis approach. Force systems, centroids and centers of gravity, analysis of structures, shear and bending moments, friction and moments of inertia.
3 Class Hours
Prerequisite: 1 year of calculus and PHY 181 Physics I

EGR 282 Mechanics (Dynamics) **3 Credits**
Concepts using vector analysis approach to kinematics and kinetics of particles, systems of particles, kinematics and kinetics of rigid bodies. Forces, mass, acceleration impulse, momentum, work and energy techniques.
3 Class Hours
Prerequisite: EGR 281 Mechanics (Statics)

EGR 285 Electrical and Electronic Circuits **3 Credits**
Units, Coulomb's Law, Ohm's Law, Faraday's Law, Kirchhoff's Law, energy and power. Resistance, inductance and capacitance parameters. Series and parallel circuits, superposition theorem, network analysis by mesh currents, modal techniques. Thevenin's Theorem, network reduction. Techniques for solving step response, pulse response, forced response, natural response and complete response. A-c circuits, phasors, impedances, resonance. Transistor parameters, linear equivalent circuits, biasing methods. Single, double and triple amplifier response in terms of gain, bandpass. Coupling techniques.
3 Class Hours
Prerequisite: 1 year of calculus and 1 year of physics or permission of instructor

EGR 286 Engineering Analysis **1 Credit**
Statistical treatment of experimental data, introduction to microprocessors with digital logic.
1 Class Hour
Prerequisite: 1 year of calculus and a high-level programming language

EGR 287 Engineering Science Laboratory I **1 Credit**
Experimentation in electrical and electronic circuits, heat and sound. Some of the experiments may include independent projects.
3 Laboratory Hours
Prerequisite: 1 year of calculus and 1 year of laboratory physics
Co-requisite: EGR 285 Electrical and Electronic Circuits

EGR 288 Engineering Science Laboratory II **1 Credit**
Experimentation in atomic and nuclear physics, light and microprocessors. Some of the experiments may include independent projects.
3 Laboratory Hours
Prerequisite: EGR 287 Engineering Science Laboratory I
Co-requisite: EGR 286 Engineering Analysis

EGR 299 Independent Project **2-4 Credits**
The student undertakes an independent project in his/her specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Departmental Approval

ENGLISH

After completing a writing sample, students may be directed by the English Department to enroll in ENG 100 Basic Language Skills, a special writing center course. Students generally begin a composition sequence with ENG 110 Written Expression I.

ENG 100 Basic Language Skills **3 Credits**
Writing workshops designed to improve a student's mastery of composition skill, including patterns of sentence structure and the recognition and correction of common errors in grammar and usage.
Minimum 3 Class Hours

ENGLISH-AS-A-SECOND-LANGUAGE COURSES

The following English courses are especially designed for international students, who are enrolled in appropriate English courses after diagnostic testing by the English Department. For programs requiring six credits of English instruction, any combination of two credit-bearing English-As-A-Second-Language courses fulfills the six credit English requirement, except with regard to programs requiring ENG 150 Technical Writing. In this case, students must comply with the prerequisite for entrance into ENG 150 Technical Writing: ENG 110 Written Expression I or ENG 107 English as a Second Language, Advanced, or permission of the instructor.

ENG 104 English as a Second Language, Review **3 Credits**
Intensive review of pre-intermediate levels of the English language for international students. Emphasis on listening, reading, speaking and some aspects of writing.
3 Class Hours

ENG 105 English as a Second Language, Intermediate I **3 Credits**
Study of the English language for international students with listening, reading, speaking, writing skills on the intermediate level. Language workshops emphasizing grammar, syntax, vocabulary and comprehension.
3 Class Hours
Prerequisite: ENG 104 English as a Second Language, Review or equivalent

ENG 106 English as a Second Language, Intermediate II **3 Credits**
Expanded study of the English language for international students. Emphasis on the development of basic English compositional skills. Continued practice in listening, reading and speaking.
3 Class Hours
Prerequisite: ENG 105 English as a Second Language, Intermediate I or equivalent

ENG 107 English as a Second Language, Advanced I **3 Credits**
Advanced study and practice in the composition of ideas and information for international students. Sentence and paragraph development, unity, coherence, style. Writing workshops for intensive practice in the formation of standard and idiomatic English. Investigation of the nature of language and various aspects of communication to stimulate critical thinking.
3 Class Hours
Prerequisite: ENG 106 English as a Second Language, Intermediate II or equivalent.

ENG 108 English as a Second Language, Advanced II **3 Credits**
Further study and practice in critical and evaluative thinking and writing for international students, based upon analysis and exposure to prose as well as major types of imaginative literature. Additional practice and familiaritization with research procedures. Writing workshops and individual conferences to guide the international student through writing assignments.
3 Class Hours
Prerequisite: ENG 107 English as a Second Language I

ENG 110 Written Expression I **3 Credits**
Study and practice in the composition of ideas and information. Sentence and paragraph development, unity, coherence, style. Nature of language, including investigation of various aspects of communication to stimulate critical thinking.
3 Class Hours

ENG 120 Written Expression II **3 Credits**
Further study and practice in critical and evaluative writing based upon analysis of major types of imaginative literature. Familiarization and practice with research procedures.
3 Class Hours
Prerequisite: ENG 110 Written Expression I or permission of instructor

ENG 150 Technical Writing **3 Credits**
Principles and practice of writing to be eventually required of students in technology programs as part of their professional duties. Emphasis on analysis and preparation of reports, articles and technical correspondence.
3 Class Hours
Prerequisite: ENG 107 English as a Second Language, Advanced or ENG 110 Written Expression I or permission of instructor.

ENG 160 Expository Writing **3 Credits**
An intensive course in expository, persuasive and critical writing for students who have already mastered the basic skills of written expression. Emphasis on critical reading of professional essayists and articles.
3 Class Hours
Prerequisite: ENG 120 Written Expression II

ENG 163 Introduction to Journalism **3 Credits**
Journalistic writing and publication, practices utilizing student publication for workshop and actual publication situations. Designed primarily for editors and staff members of Fulcrum, the campus newspaper. (Liberal Arts students may not use this course to fulfill composition or literature requirements).
3 Class Hours

ENG 165 Creative Writing—Publication **4 Credits**
Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor. Writing, evaluating and arranging of material for a campus literary magazine.
3 Class Hours plus Workshop Hours

ENG 166 Creative Writing **3 Credits**
Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor.
3 Class Hours

ENG 200 Media and Culture **3 Credits**
A critical examination of the mechanisms and influences of radio, television and film media on the individual and on society. Exposure to culturally important media works and to some of the important commentators on these works. (Liberal Arts students may not use this course to fulfill composition or literature requirements.)
3 Class Hours

ENG 299 Independent Study: English **3 Credits**
An individual student project concerned with advanced work in a specific area of language or literature. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: One semester of college level work.

FIRE PROTECTION TECHNOLOGY

FRS 101* Fire Prevention and Protection **3 Credits**
Methods, policies and procedures relative to establishing and operating appropriate fire prevention and protection programs.
3 Class Hours

FRS 103* Fire Fighting Tactics and Strategy **3 Credits**
Focus on pre-planning and the development of fire fighting tactics appropriate for a wide variety of hazards. Review of basic information and some local conditions. The case study method is used to develop plans and tactics relating to the student's own departments. (Not offered in 1981-82 academic year).
3 Class Hours

FRS 105* Arson Investigation **3 Credits**
Fire investigations and arson. Responsibilities of the arson investigator, tools of the investigator, photography, electronic devices, laws pertaining to arson, motives and tools of the arsonist, courtroom procedures. A field experience will be included.
3 Class Hours

FRS 107 Legal Aspects of the Fire Service **3 Credits**
Laws and regulations as they pertain to the fire service and its personnel. Legal terminology necessary for the interpretation of pertinent laws and decisions. Legal status of the fireman, his rights, duties and liabilities. Responsibilities and powers of the fire service in enforcement of ordinances and codes. (Not offered in 1981-82 academic year).
3 Class Hours

FRS 108* Building Construction for Fire Science **3 Credits**
Fire fighters are confronted with many unknown factors at the fire ground. Among these is the unknown structural stability of the buildings they must enter. Basic principles of building construction and design with emphasis focused on fire protection concerns. Building materials included. (Not offered in 1981-82 academic year).
3 Class Hours

FRS 200* Hazardous Materials **3 Credits**
Chemicals and chemical processes most closely involved in fire protection and fire fighting. Use, storage, transportation and disposal of hazardous materials with emphasis on flammable liquids, flammable solids, oxidizing materials, corrosive liquids, compressed gases.
3 Class Hours
Prerequisite: Chemistry

***TAUGHT EVENINGS ONLY**

FRS 201* Fire Service Hydraulics **3 Credits**
Application of the laws of mathematics and physics to properties of fluid states, force pressure and flow velocities. Emphasis in applying principles of hydraulics to fire-fighting problems. (Not offered in 1981-82 academic year).
3 Class Hours
Prerequisite: MAT 139 Algebra

FRS 205* Fire Department Administration **3 Credits**
Organization of fire departments with emphasis on personnel management, distribution of equipment, maintenance of records, communications, data collection and community relations. ISO Grading Schedule. (Not offered in 1981-82 academic year).
3 Class Hours

FRS 210* Fire Safety-Building Design **3 Credits**
Advanced principles of building design, stability, collapsibility, testing procedures, emergency operations, review of accidents, field trips.
3 Class Hours

FRS 250 Special Topics **1-3 Credits**
Exploration of special topics in Fire Protection Technology. May be repeated since topics will vary from semester to semester.

FRS 299* Independent Study-Fire Service **1-3 Credits**
An individual student project in an area of fire protection or service beyond the scope of regular coursework. Conducted under supervision of coordinator and approved by department chairperson.
Prerequisites: 6 Credits in FRS coursework and 6 Credits in General Education courses

FRENCH

FRE 101, 102 Beginning French **4,4 Credits**
Basic principles of grammar and syntax. Emphasis on oral practice in classroom supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.
4 Class Hours, 1 Laboratory Hour each
Prerequisite: FRE 101 Beginning French for FRE 102

FRE 201 Intermediate French I **3 Credits**
Intensive review of grammar and syntax and oral practice in classroom and audio-lingual laboratory. Reading and discussion of works selected by the instructor.
3 Class Hours, 1 Laboratory Hour
Prerequisite: FRE 102 Beginning French

FRE 202 Intermediate French II **3 Credits**
Reading of literary works of recognized authors. Continuation of grammar, syntax and oral practices in classroom and audio-lingual laboratory.
3 Class Hours, 1 Laboratory Hour
Prerequisite: FRE 201 Intermediate French I

FRE 203 Masterpieces of French Prose and Poetry I **3 Credits**
The Middle Ages through the Age of Reason. Readings, lectures and discussions of representative works. (Not offered in 1981-82 academic year).
3 Class Hours
Prerequisite: FRE 202 Intermediate French II

FRE 204 Masterpieces of French Prose and Poetry II **3 credits**
The Age of Romanticism to contemporary times. Readings, lectures and discussions of representative works. (Not offered in 1981-82 academic year).
3 Class Hours
Prerequisite: FRE 203 Masterpieces of French Prose and Poetry I

FRE 205 The Art of French Conversation and Composition **3 Credits**
To develop the student's perception and appreciation of spoken and written French to prepare him or her for further study of the French language, literature and culture. (Not offered in 1981-82 academic year).
3 Class Hours
Prerequisite: FRE 201 and FRE 202 Intermediate French orequivalent

FRE 299 Independent Study: French **1-3 Credits**
An individual student project concerned with advanced work in a specific area of French. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in French

GEOGRAPHY

GEO 110 Physical Geography **3 Credits**
Interrelationships of global systems of climate, vegetation, soils, landform development and their significance to humans. The impact of human presence upon natural systems.
3 Class Hours

GERMAN

GER 101, 102 Beginning German **4,4 Credits**
Basic principles of grammar and syntax. Emphasis on oral practice in classroom. Written homework assignments, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.
4 Class Hours, 1 Laboratory Hour each
Prerequisite: GER 101 Beginning German for GER 102

GER 201 German Conversation and Composition **3 Credits**
Emphasis on the four language skills—reading, writing, speaking, listening—especially on speaking and writing. Intensive discussion of style, grammar and the contemporary idiom to enhance the student's ability to express himself in German.
3 Class Hours, 1 Laboratory Hour
Prerequisite: GER 102 Beginning German

GER 299 Independent Study: German **1-3 Credits**
An individual student project concerned with advanced work in a specific area of German. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in German

HEALTH SERVICES

HSV 110 Contemporary Health Issues (TV Course) 3 Credits
Action-oriented course designed to identify and examine major health issues of our time. Advances in medical science and changes in life style over the past 50 years have altered the health concerns confronting the nation's population. Large numbers of health problems are self-inflicted today, the results of personal and social decisions, ignorance and apathy. Designed to counteract apathy, dispel myths, and provide accurate information upon which to make decisions affecting individual and social health.
30 Half-Hour TV Presentations—To be shown on home TV on WSKG-TV (Channel 46) and/or Cable TV

HISTORY

HIS 100 The Rise of the West 3 Credits
Core course required of all Liberal Arts students and a prerequisite for some other history (HIS) courses. However, even where it is not a prerequisite, students are urged to complete this course before enrolling in any other history course.

Introduction to both the study of history and the evolution of modern society, including its basic ideas, values and institutions, through an examination of Western Civilization. The Age of Transition—the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment. The Industrial Transformation, appearance of modern constitutional and authoritarian government, major socio-political ideologies—liberalism, socialism, communism, nationalism, imperialism, fascism, totalitarianism. The intellectual crisis of the 20th Century, World Wars I and II.
3 Class Hours

HIS 115 Modern Global History:
The World in Transition 3 Credits
Historical development of Western Civilization in the 19th-20th centuries, contrasted with selected non-Western societies. The key theme of the effects of modernity examined in several aspects: the regional nature of geography and demography; the important influences of traditional values and religous beliefs in the areas selected for study; the evolution of capitalism, socialism, communism, and nationalism and how these concepts affected less developed countries; the impact of industrialization, colonialism, technology and science on the peoples of the contemporary world.
3 Class Hours

CIVILIZATION SURVEYS
(HIS 130-161)

Liberal Arts students may select any one of the following courses in order to satisfy the remainder of the history requirement.

HIS 130 United States History I 3 Credits
The United States from 1607 to 1898. The colonies, Revolution, Constitution, early national period, Age of Jackson, expansion, Civil War and Reconstruction, the West and the Gilded Age. Survey of political, economic, cultural developments through the 19th Century.
3 Class Hours

HIS 131 United States History II 3 Credits
The United States from 1898 to the present. The American Empire, progressive reforms, World War I, the Twenties, Depression, New Deal, World War II and the Cold War, post-war domestic issues.
3 Class Hours

HIS 141 Development of Modern Latin America 3 Credits
History of Latin America from Independence to the present, emphasizing the causes of political instability and economic backwardness. Close analyses of reform, reactionary and revolutionary movements in modern Latin America, and of inter-American affairs. (Formerly History of Latin America II.) (Not offered in 1981-82 academic year).
3 Class Hours

HIS 150 Russian and East European History I 3 Credits
Survey of Slavic history from early settlement in Kievan Russia and Eastern Europe, Mongol and Turkish conquests, rise of Muscovy and House of Hapsburg, reigns of Peter I and Catherine II, fate of Poland, Ottoman Empire in Europe, and other significant topics to the end of the Crimean War. (Not offered in 1981-82 academic year).
3 Class Hours

HIS 151 Russian and East European History II 3 Credits
From the latter half of the 19th Century including the gradual transition to modernity, imperialism of Russia, Austria and the Ottomans, rise of Balkan nationalism, the Dual Monarchy of Austria-Hungary, revolutions, World Wars I and II, Soviet hegemony and contemporary issues. (Not offered in 1981-82 academic year).
3 Class Hours

SPECIAL TOPICS IN HISTORY (HIS 170-199)

HIS 170 The Future as History:
A Look at the 21st Century United States 3 Credits
Does the future have to be a shock? The objective of this course is to prove it does not have to be. Three or four possible courses which the next 100 years may take will be plotted, using knowledge of the economic, political and social developments of the past 100 years of U.S. history and a basic understanding of the present day situation.
3 Class Hours
Prerequisite: HIS 130 United States History I or HIS 131 United States History II or POS 201 Introduction to American Government

HIS 175 Local History 3 Credits
The early history of our local area including the late 18th Century Indian communities and the growth of 19th Century white settlements through development of industries and institutions from the days of the frontiersmen to the era of the railroaders and the factory hands. Historical methods of research. An historical walking tour of Binghamton, investigation of historical records on the premises of cooperative local institutions, and observation of contributions to local history. (Formerly HIS 231.)
3 Class Hours

HIS 180 Utopia: The History of Perfect Societies **3 Credits**
Examines the relationship between the ''real'' and the ''ideal'' in fictional and actual utopian communities. Comparisons of utopian thought from the classical, medieval and modern periods, from the Garden of Eden to the contemporary commune. Writings of Plato, More, Condorcet, Owen, Saint-Simon, Fourier, Marx, Wells, Huxley, Telhard de Chardin, Wagar and others.
3 Class Hours

HIS 183 Woman as a Force in History **3 Credits**
Women's contributions to the evolution of Western institutions. Exploration of the origins of myths about women, women's roles in modern society, evolution of modern feminism. (Formerly HIS 227.)
3 Class Hours

HIS 185 Hitler and The Nazi Dictatorship **3 Credits**
Origins of National Socialism, role of Adolf Hitler, road to Nazi Dictatorship, Nazi political and social revolutions, Hitler's foreign policy and Europe's reaction, World War II and Hitler's ''New Order'', Nazi system of persecution and genocide, collapse of the 1,000-year Reich, legacy of the Hitler period.
3 Class Hours

HIS 190 The World Since 1945 **3 Credits**
An overview of the changing patterns in world affairs since the end of World War II in 1945. For example, emergence of the Third World, the Cold War, responses to scientific/technological change, insurgent movements, attempts at world organization/disarmament, the energy/ecology crisis, the various trouble spots like the Middle East, Panama Canal, Berlin.
3 Class Hours
Prerequisite: HIS 100 The Rise of the West or HIS 131 United States History II

SHORT MODULES
(HIS 200-295)

The department offers short modules of courses that carry one credit each. These deal with concentrated topics in history and are less than one semester in length. For example, modules have been given in ''The Great Man in History'' series focusing on Adolf Hitler, Fidel Castro, Charles Darwin and Chairman Mao Tse-tung, each covering a 5-week period.

HIS 200 Series—Great Figures in History **1 Credit**
Examining the advantages and disadvantages of using a biographical approach to the study of a particular period in history. In analyzing a ''great figure,'' the student studies the interconnections between the actions of a great person, the role of chance and pressures of major social forces in shaping the course of human history.
3 Class Hours(For 5 weeks)

HIS 299 Independent Study **1-3 Credits**
An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson. Independent study does not satisfy the Liberal Arts requirement in history, and it may not be taken in lieu of a 100-series course.
Prerequisite: HIS 100 The Rise of the West

HUMAN DEVELOPMENT COURSES

Across the nation students have indicated that they want the opportunity in college to identify, pursue and accomplish personal goals, to develop healthier self-concepts, to develop more effective levels of self-understanding and to become open human beings who can build trusting relationships with others. The student affairs courses can be one means of facilitating humanistic objective espoused by ''new'' college students.

SAC 101 The Individual in a Changing Environment **3 Credits**
Individual interaction and reading designed to foster understanding and application of psychological and emotional growth. Basic class material is the individual and group analysis of student's experience within an immediate unstructured setting. Focus on analysis and organization of experience into a personally rewarding conception of growth. Individual self-development projects outside the class.
3 Class Hours

SAC 110 Orientation for International Students **2 Credits**
An orientation course for international students designed to aid in their adjustment as students at BCC. Study skills, academic regulations, the American educational system, individual educational and vocational goals, American customs. Especially intended for students during their initial semester of enrollment in conjunction with American language developmental course offerings such as ENG 104, 105, 106 English as a Second Language and SPK 104 Basic Speaking.
2 Class Hours

SAC 250 Career Exploration **3 Credits**
How to plan, establish, change a career. The process of deciding on a career and implementing career goals, assessment of values, interests and skills plus their relationship to occupations. Analysis of the labor market needs, identification of employers and sources of occupation information, the means of securing employment through proposals, resumes, applications and job interviews. Supportive small group atmosphere. Class activities include discussion, speakers, testing, and individual counseling.
3 Class Hours

SAC 295, 296 Seminar in Human Potential **3,2 Credits**
Human Potential focuses on the person's own resources, strengths, motivators, values and successful and satisfying experiences. Human potential sessions are positive group experiences working on and with the potential and strengths of the feeling concerning one's self and others by utilizing specific procedures.
3, 2 Class Hours

HUMANITIES

HUM 201 The Concept of Man: Naturalism and Evolutionary Thought **3 Credits**
An interdisciplinary course exposing the student to a broad spectrum of materials: drama, film, fiction and the arts, as well as expository anthropological and biological writing dealing with man's rediscovery of his ''animality'' and its effects on his self-concept. Focusing on the years 1850 to the present, the student reads such authors as Freud, Marx, Darwin, Crane, Dreiser, Zola, Morris, Lorenz and Shockley. Completion of a guided independent research project in an area of the student's interest is required. (Not offered in 1981-82 academic year).
3 Class Hours

INDUSTRIAL SAFETY AND OCCUPATIONAL HYGIENE

SAF 100 OSHA Codes and Regulations **3 Credits**
In-depth study of the federal Occupational Safety and Health Act of 1970 (OSHA). Other pertinent laws for the protection of the ambient and occupational environments, how they are put together, what is pertinent and how they are used.
3 Class Hours

SAF 101 Accident Investigation and Prevention **3 Credits**
Identification of present and future hazards in facilities, operations and products. Methods of investigation of hazards, reports of injuries, property damage and their causes. Development of accident prevention and loss control methods, procedures and programs.
3 Class Hours

SAF 102 Design and Evaluation of a Safety Program **3 Credits**
Development of comprehensive program to protect the employee from potential health hazards in the work environment. Elements of a comprehensive industrial hygiene survey: evaluating existing control mechanisms, review of process or operations, inventory of hazardous materials sources, field study and results, corrective action plan and methods of control.
3 Class Hours

SAF 105 Material Handling and Storage of Special and Common Products **3 Credits**
An in-depth study of handling and storage principles and procedures. Personal injuries, improper techniques and hazards of special materials, as well as correct methods and procedures. Visits to industrial sites.
3 Class Hours

SAF 110 Ventilation and Exhaust **3 Credits**
Principles of ventilation and ventilation control. Student will visit various industries to study the practical application of systems, engineering problems, methods of control of industrial wastes through the systems.
3 Class Hours

SAF 111 Machine Guarding **3 Credits**
Various types of methods and systems in use, advantages and disadvantages of types, design of appropriate machine guarding for work being done. Visits to industrial sites.
3 Class Hours

SAF 120 Introduction to Industrial Hygiene **3 Credits**
Fundamentals of industrial hygiene, review of basic mathematics, chemical concepts, associated biochemical concepts, industrial toxicology techniques. Use of guides, codes, regulations and standards for chemical and physical agents. Concepts of a noise program and air sampling.
3 Class Hours
Prerequisite: Chemistry or permission of instructor

SAF 130 Product Safety **3 Credits**
Intended and potential uses of a product, its material and construction. Establishment of general requirements for the application of safety principles throughout planning, design, development, fabrication and test of various products to achieve maximum product safety.
3 Class Hours

SAF 250 Special Topics: Safety **1-3 Credits**
An opportunity to explore in depth special topics and problems in Industrial Safety and Health. May be repeated once for credit as the subjects will vary from semester to semester.

SAF 299 Independent Study **1-3 Credits**
An individual student project beyond the scope of regular coursework. Conducted under supervision of coordinator and approved by department chairperson.
Prerequisites: 6 Credits in Industrial Safety and Occupational Hygiene courses

INTERIOR DESIGN

INT 101 History of Architecture—Exterior and Interior **3 Credits**
Survey of exterior and interior architectural styles from Ancient Egyptian through 20th Century.
3 Class Hours

INT 110 Interior Design I **4 Credits**
Projects in residential interior design including color coordination, floor plan, space utilization. Study of currently available resources.
2 Class Hours, 4 Laboratory Hours
Prerequisite: ART 105 Introduction to Design
Recommended: CIV 117 Architectural Drafting and INT 101 History of Architecture—Interior and Exterior

INT 111 Interior Design II **4 Credits**
Two major projects, one commercial and one residential, stressing space utilization. Contrasting building types must be selected for the projects, one contemporary form and one traditional.
2 Class Hours, 4 Laboratory Hours
Prerequisite: INT 110 Interior Design I

INT 120 Construction and Workroom Techniques I **2 Credits**
Study of processes, manufacture and installation of interior design products.
2 Class Hours

INT 121 Specification Writing for Interior Designers **2 Credits**
Techniques used in writing specifications for interior design projects.
2 Class Hours, 1 Laboratory Hour

INT 130 Rendering **2 Credits**
Perspectives of room interiors: treats the problems of representation related to light, texture and color.
4 Laboratory Hours

INT 140 Fabric Analysis **2 Credits**
Types of fabrics used in interior design including methods of manufacturing, fiber and construction analysis, historical origins.
2 Class Hours

ITALIAN

ITA 101, 102 Beginning Italian **4, 4 Credits**
Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.
4 Class Hours, 1 Laboratory Hour each
Prerequisite: ITA 101 Beginning Italian for ITA 102

ITA 201 Intermediate Italian I **3 Credits**
Comprehensive review of grammar and structure of the language. Intensive reading of literary works as a basis for topics of conversation in Italian in the classroom. Emphasis on aural comprehension and oral practice in classroom and audio-lingual laboratory.
3 Class Hours, 1 Laboratory Hour
Prerequisite: ITA 102 Beginning Italian

ITA 202 Intermediate Italian II **3 Credits**
Intensive reading of literary works of recognized authors as a basis for topics of conversation in Italian in the classroom. Practice in audio-lingual laboratory.
3 Class Hours, 1 Laboratory Hour
Prerequisite: ITA 201 Intermediate Italian I

ITA 299 Independent Study: Italian **1-3 Credits**
An individualized student project concerned with advanced work in a specific area of Italian. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in Italian

LITERATURE

The Department of English recommends that students complete a composition program before taking literature courses.

LIT 210 Studies in United States Literature I **3 Credits**
History and development of United States literature from colonial period to late 19th Century. Emphasis on several major writers of the period.
3 Class Hours

LIT 211 Studies in United States Literature II **3 Credits**
History and development of United States literature from late 19th Century to the present. Emphasis on several major writers of the period.
3 Class Hours

LIT 214 Studies in British Literature I **3 Credits**
History and development of British literature from the Middle Ages to the 18th Century. Selections of literary merit from prose, drama, poetry.
3 Class Hours

LIT 215 Studies in British Literature II **3 Credits**
History and development of British literature from the beginning of the 18th Century to the middle of the 20th.
3 Class Hours

LIT 220 The World of the Short Story **3 Credits**
An examination of the development of American, British and Continental short stories. Emphasis on theme and structure.
3 Class Hours

LIT 230 American Drama **3 Credits**
Studies in dramatic theories, techniques and thematic problems of the American drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 233 World Drama **3 Credits**
Studies in dramatic theories, techniques and thematic relationships of the world drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 240 The Poetic Experience: Sight and Sound **3 Credits**
An exploration of the different modes and moods of poetic expression. A thematic and structural approach to poetry as a total experience.
3 Class Hours

LIT 250 Portraits of Women: Search for Understanding **3 Credits**
An in-depth examination of what it means to be a woman as presented by representative literary artists, both women and men, in critically acclaimed pieces of literature. Emphasis on 19th and 20th Century material.
3 Class Hours

LIT 253 Psychological Investigation in Literature **3 Credits**
The application of Jungian, Freudian and other psychological theories and insights to selected short stories, novels, and poems to promote more penetrating appreciation of characters' motivations and actions and the literary work in general.
3 Class Hours

LIT 255 Modern Existential Literature **3 Credits**
An investigation of the themes of alienation and the absurd in selected prose and poetry to shed light on man's current existential crisis.
3 Class Hours

LIT 257 Heritage of Modern Literature **3 Credits**
An attempt to define modern literature as an embodiment and development of antique themes and traditions through the comparative study of the epic, the novel and related genre.
3 Class Hours

LIT 260 Detective Fiction **3 Credits**
A critical study of one of the most popular literary forms of our time designed for armchair detectives. Starting with Poe, Conan Doyle (Sherlock Holmes) and other classics in the field, the course traces the development of the detective story from its puzzle-solving beginnings to the modern psychological novel of crime and detection.
3 Class Hours

LIT 263 Children's Literature **3 Credits**
Children's literature with introduction to the variety of books available today and development of standards for evaluating them. Prime concern is to help the student use literature with children creatively, recognizing the importance of language, arts, communication and listening skills in cognitve development.
3 Class Hours

LIT 265 Biblical Literature **3 Credits**
An acquisition of the skills necessary to study the Bible. Emphasis on the Biblical narrative and its relationship to Western culture through reading and analysis.
3 Class Hours

LIT 269 Prison Literature **3 Credits**
An examination of the prison experience through a variety of readings in prose and poetry that focus on man's continuing struggle to understand this social phenomenon.
3 Class Hours

MARKETING COURSES

are under the Business heading starting on page 70

MATHEMATICS

MAT 003 Basic Mathematics Review **3 Credits***
*Credit is not applicable toward A.A, A.S., or A.A.S. degrees. Basic Mathematics Review is designed to give the student proficiency in elementary mathematics and provide a firm foundation for credit courses. It consists of three units allowing each department to select the units needed as prerequisites for its courses or programs.
3 Class Hours

A. Arithmetic and Introduction to Algebra
Arithmetic of whole numbers, fractions and decimals. Percent, measurment, metric units, ratio and proportion. Language of algebra, arithmetic of signed numbers, solving simple equations. Problem solving.

B. Elementary Algebra
Addition, subtracting, multiplication, division and simplification of algebraic expressions. Graphing. Solving linear equations and inequalities in two variables.
Prerequisite: Basic Mathematics Review A

C. Geometry and Introduction to Trigonometry
Properties and measurements of angles. Similar and congruent triangles, polygons and circles. Perimeter, area and volume measurements. Use of trigonometric ratios to solve right triangle problems.
Prerequisite: Basic Mathematics Review A

Basic Math Review is a self-paced course. Students use self-study texts and audio-visual aids with instructors available for individual help.

A complete sequence of Basic Math Review would begin with the first section of Arithmetic and Introduction to Algebra and end with the last section of Geometry and Introduction to Trigonometry. But few students study the entire sequence. The entry point in the sequence is determined by a placement test. The exit point is usually determined by the student's program requirements. All units are available in every scheduled section.

MAT 106 Basic Technical Mathematics I **3 Credits***
Basic properties of numbers involving addition, subtraction, multiplication and division. Percentage, ratio and proportion, interpretation of graphs, use of simple algebraic quantities and equations. Metric systems and conversions to the English system. Many applicaions taken from drafting and the machine shop.
3 Class Hours
Prerequisite: MAT 106 Basic Technical Mathematics I
***Not applicable toward AS, AA or AAS degrees**

MAT 107 Basic Technical Mathematics II **3 Credits***
Linear equations, right angle and oblique triangle trigonometry, powers, roots, and exponents. Formulas, Pythagorean Theorem, vectors, quadratic equations. Many applications taken from drafting and the machine shop.
3 Class Hours
Prerequisite: MAT 106 Basic Technical Mathematics I
***Not applicable toward AS, AA or AAS degrees**

MAT 113 Mathematics: A Liberal Art **3 Credits**
Introduction to the variety and structural beauty of mathematics. Inductive and deductive reasoning, games and number theory, large numbers, exponents, mathematical curves in nature and science, elementary probability, statistics, statistical graphs, misleading uses of statistics, moebius strips. For Liberal Arts students. Recommended for Fine Arts or Humanities majors and for Science majors.
3 Class Hours
Prerequisite: MAT 003 Basic Mathematics Review A or equivalent

MAT 114 Statistics **3 Credits**
Descriptive statistics, organization and presentation of data, measures of central tendency. Variance, standard deviation, binomial distribution, statistical inference. Random sampling, hypothesis testing, confidence intervals, normal distribution, analysis of variance. Chi-square distribution, students t-distribution, correlation and regression. Formerly MAT 124 Statistics.
3 Class Hours
Prerequisite: Basic Mathematics Review A or equivalent

MAT 117 Elementary Finite Mathematics with Algebra **4 Credits**
Sets, probability, matrix algebra, graphing, inequalities, linear programming.
4 Class Hours
Prerequisite: Basic Mathematics Review A or equivalent

MAT 119 Modern Basic Mathematics I **3 Credits**
Algebra of propositions. Algebra of sets. Systems of numeration other than base ten. Properties of the operations of addition and multiplication for the sets of whole numbers, integers and rational numbers. Introduction to number theory. For Liberal Arts Students—recommended for elementary education majors. Formerly MAT 131 Modern Basic Mathematics I.
3 Class Hours
Prerequisite: MAT 003 Basic Mathematics Review B or equivalent

MAT 121 Finite Mathematics **3 Credits**
Sets and logic, permutations, combinations and probability, vectors and matrices, inequalities and linear programming. The computer language BASIC is used.
3 Class Hours
Prerequisite: MAT 003 Basic Mathematics Review B or equivalent and CST 110 Introduction to Data Processing. If student has not had CST 110, then CST 100 BASIC may be substituted as a prerequisite or taken concurrently.

MAT 122 Introduction to Calculus **3 Credits**
Analytic geometry of line, circle and parabola. Functions and their graphs. Limits and continuity, differentiation—rules and applications, integration—techniques and applications. Exponential and logarithmic functions and applications. Recommended for social science, health science and business students. Not for math majors or science majors in the A.S. degree program.
3 Class Hours
Prerequisite: MAT 139 Algebra or equivalent

MAT 139 Algebra **4 Credits**

Real and complex numbers, algebraic operations, functions and graphs, exponents and logarithms, linear and quadratic equations, systems of linear equations, linear inequalities, binomial theorem.
4 Class Hours
Prerequisite: Basic Mathematics Review B or equivalent

MAT 140 Trigonometry **4 Credits**

Trigonometric functions and their graphs, solution of triangles, trigonometric identities and equations, inverse trigonometric functions, position vectors, polar representation of complex numbers. DeMoivre's theorem.
4 Class Hours
Prerequisite: MAT 139 Algebra or equivalent

MAT 141 College Algebra and Trigonometry **4 Credits**

A review of algebra and trigonometry emphasizing computational skills and technical applications. Algebraic operations, functions and graphs, exponents and logarithms, linear equations, system of linear equations and determinants. Trigonometry and the solution of triangles, trigonometric functions and their graphs, quadratic equations, vectors, complex numbers. For engineering technology students.
4 Class Hours
Prerequisite: MAT 140 Trigonometry or instructor's permission

MAT 142 Applied Calculus I **4 Credits**

Basic analytic geometry, distance, equations of lines. Limits, continuity and the derivative. Differentiation of polynomials, maxima and minima. Differentials and approximation, applications in kinematics and circuits. The definite integral and applications to finding area, center of gravity, volume of revolution, work done. Approximate integration, differentiating products and quotients, implicit differentiation and related rates, differentiation and integration of logarithmic, exponential, trigonometric and inverse trigonometric functions.
4 Class Hours
**Prerequisite: MAT 141 College Algebra and Trigonometry or
MAT 140 Trigonometry**

MAT 153 Discrete Mathematics I **4 Credits**

Topics from mathematics needed to understand the operation and use of the digital computer. Algebra of sets, product sets. Relations, equivalence relations, partitions, partial ordering. Functions: one-to-one, onto, inverse. Vectors, matrices, matrix algebra, determinants. Systems of linear equations, linear programming, difference equations. Fundamental principles of counting, binomial coefficients, permutations, combinations, ordered partitions, tree diagrams.
4 Class Hours
Prerequisites: CST 115 Problem Solving with Pascal and MAT 139 Algebra

MAT 154 Discrete Mathematics II **4 Credits**

Topics from mathematics needed to understand the operation and use of the digital computer. A continuation of MAT 153 Discrete Mathematics I. Graph theory, connectivity, matrices and graphs, trees, rooted trees, directed graphs. Finite state machines, strings. Algebraic systems and formal languages, posets and lattices, propositional calculus, Boolean algebra.
4 Class Hours
Prerequisites: MAT 153 Discrete Mathematics I

MAT 161 Pre-Calculus Mathematics **4 Credits**

The real number system, inequalities, graphing and the Cartesian Coordinate System, the algebra of functions, polynomial and rational functions, trigonometric functions, inverse functions, exponential and logarithmic functions.
4 Class Hours
Prerequisite: MAT 139 Algebra and MAT 140 Trigonometry or equivalent

MAT 163 Calculus with Analytic Geometry I **4 Credits**

Analytic geometry of lines, conic sections, translations of axes, asymptotes, symmetry. Functions and graphs. Limits and continuity. Differentiation of algebraic functions and applications including motion, related rates, theory of extremes, differentials. Summation, integration and the Fundamental Theorem of Calculus. Integration of polynomials and applications including area, volume, work and arc length.
4 Class Hours
**Prerequisite: MAT 161 Pre-Calculus Mathematics or
MAT 140 Trigonometry or equivalent**

MAT 164 Calculus with Analytic Geometry II **4 Credits**

Differentiation and integration of trigonometric, inverse trigonometric, exponential, logarithmic and hyperbolic functions. Techniques of integration. Vectors and parametric equations. Polar coordinates. Indeterminate forms and L'Hospital's Rule. A brief introduction to infinite series.
4 Class Hours
Prerequisite: MAT 163 Calculus with Analytic Geometry I

**MAT 171 Engineering Calculus with
Analytic Geometry I** **4 Credits**

Absolute value and inequalities, equations of a line and a circle. Limits, continuity, derivatives of algebraic functions, applications to curve sketching, related rates, maxima and minima. Antidifferentiation and applications to the solution of differential equations with variables separate. The definite integral and the Fundamental Theorem of Calculus.
4 Class Hours

**MAT 172 Engineering Calculus with
Analytic Geometry II** **4 Credits**

Applications of the definite integral. Logarithmic, exponential and trigonometric functions. Methods of integration, plane analytic geometry and conic sections. Hyperbolic functions, polar coordinates, indeterminate forms, improper integrals.
4 Class Hours
**Prerequisite: MAT 171 Engineering Calculus with
Analytic Geometry I**

MAT 241 Applied Calculus II **3 Credits**

Integration by substitution, by partial fractions and by parts. Improper integrals, parabola, hyperbola, ellipse and translation of axes. First and second order linear differential equations. Partial derivatives, iterated and double integrals. Polar coordinates, curve plotting and area. Sequences, series, convergence tests, power series and Fourier series.
3 Class Hours
Prerequisite: MAT 142 Applied Calculus I

MAT 243 Differential Equations **4 Credits**

Equations of order one, integrating factors, substitution method, Bernoulli's equation, linear equations of higher order with constant and undetermined coefficients, variation of parameters, inverse differential operators, the Laplace transform.
4 Class Hours
Prerequisite: MAT 241 Applied Calculus II or
MAT 164 Calculus with Analytic Geometry II

MAT 246 Applied Linear Algebra **4 Credits**

A non-calculus study of matrices, determinants, vector spaces and linear transformations. (Not offered in 1981-82 academic year).
4 Class Hours
Prerequisite: MAT 241 Applied Calculus II

MAT 252 Mathematical Modeling with The Computer **4 Credits**

Computer techniques for the modeling and solution of mathematical problems. Roots of equations, systems of linear equations, linear programming, iteration and recursion, searching and sorting, stacks, linked lists and trees, numerical integration, mathematical games. The computer language Pascal is used.
4 Class Hours
Prerequisites: CST 115 Problem Solving with Pascal and either MAT 164 Calculus with
Analytic Geometry II or MAT 172 Engineering Calculus with
Analytic Geometry II

MAT 263 Calculus with Analytic Geometry III **4 Credits**

Sequences, series, power series and radius of convergence. Three dimensional analytic geometry and vectors including equations of lines, scalar products, vector products, equations of planes, cylindrical coordinates. Moments, centroids, and moments of inertia. Partial differentiation, directional derivatives, gradients, maxima and minima. Multiple integrals, volume by multiple integration.
4 Class Hours
Prerequisite: MAT 164 Calculus with Analytic Geometry II

MAT 264 Linear Algebra **4 Credits**

Linear equations and matrices, real vector spaces, the algebra of linear transformations and matrices, determinants, eigenvalues and eigenvectors.
4 Class Hours
Prerequisite: MAT 164 Calculus with Analytic Geometry II or
MAT 172 Engineering Calculus with Analytic Geometry II or
MAT 241 Applied Calculus II

MAT 266 Introduction to Higher Mathematics **3 Credits**

Exposure to basic mathematical methods and concepts. Sets, sequences, mappings, convergence. Preparation for analysis, topology and modern algebra.
3 Class Hours
Prerequisite or corequisite: MAT 263 Calculus with Analytic Geometry III or
MAT 271 Engineering Calculus with Analytic Geometry III or
permission of instructor

MAT 271 Engineering Calculus with Analytic Geometry III **4 Credits**

Solid geometry, lines and planes, vector calculus in space, quadric surfaces, partial differentiation, directional derivatives, gradient, line integrals, multiple integrals, infinite series, complex numbers and functions.
4 Class Hours
Prerequisite: MAT 172 Engineering Calculus with Analytic Geometry II

MAT 272 Differential Equations with Linear Algebra **4 Credits**

First order differential equations. Matrices, determinants and solutions of systems of linear equations. Vector spaces, Wronskians, linear transformations and differential operations. Characteristic values and vectors, real symmetric matrices, functions of matrices. Homogeneous and nonhomogeneous linear differential equations with constant coefficients, undetermined coefficients and variations of parameters. Matrix formulation of linear systems of differential equations and solution by characteristic values, the exponential matrix function and nonhomogeneous linear systems. Series solutions of differential equations at ordinary and singular points.
4 Class Hours
Prerequisite: MAT 271 Engineering Calculus with Analytic Geometry III or
MAT 263 Calculus with Analytic Geometry III

MAT 299 Independent Study **1-4 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Department Chairperson Permission

MECHANICAL ENGINEERING TECHNOLOGY

MET 113 Engineering Drawing I **2 Credits**

Basic course that includes lettering, line and instrument exercises, orthographic projection, sketching, dimensioning, auxiliary views, sections, threads, fasteners.
1 Class Hour, 2 Laboratory Hours

MET 114 Engineering Drawing II **2 Credits**

Fits and tolerances, developments and intersections, pictorial drawings, true position dimensioning (ANSI standards), assembly drawings, graphical design using standard industrial parts and descriptive geometry.
1 Class Hour, 2 Laboratory Hours
Prerequisite: MET 113 Engineering Drawing I

MET 115 Graphics **2 Credits**

Basic course that includes lettering, orthographic projecting, dimensioning, sections, auxiliary views by instrument and free hand. True length, true size, relationships between lines and planes. For Engineering Science students.
1 Class Hour, 2 Laboratory Hours

MET 121 Manufacturing Processes I **3 Credits**

A basic study of manufacturing materials and processes, such as casting metal, production of ferrous and non-ferrous metals and shape changing processes of hot and cold working techniques. Oxyacetylene, arc, resistance welding. Machine tool operation, instrumentation and measurement.
2 Class Hours, 2 Laboratory Hours

MET 122 Manufacturing Processes II **2 Credits**

Abrasives and grinding, indexing, gearing, special machining processes such as numerical control and electrical discharge machining. Advanced elements of machine tool operation including the use of grinding machines, turret lathe, honing, lapping.
1 Class Hour, 3 Laboratory Hours
Prerequisite: MET 121 Manufacturing Processes I

MET 129 Survey of Engineering Laboratories **3 Credits**
Engineering materials, physical tests and manufacturing processes encountered in mechanical technology laboratories. Lectures, demonstrations and participation in manufacturing processes, casting, welding and forging, metallurgy, strength of materials, fluids and thermodynamics, technical sketching and blueprint reading, scientific calculators. For Secretarial Science students.
2 Class Hours, 2 Laboratory Hours

MET 132 Applied Mechanics **4 Credits**
STATICS: Free body diagram, trusses, friction, centroids, moments of inertia.

DYNAMICS: Motion of particles and bodies without consideration of the forces required to produce or maintain motion (kinematics), unbalanced forces and the motion they produce (kinetics), work and energy, impulse and momentum.
4 Class Hours
Prerequisites: PHY 141 Physics and
MAT 141 College Algebra and Trigonometry or
equivalent or department chairperson approval

MET 134 Fundamentals of Stationary Engineering **3 Credits**
A course in general background information in basic topics relating to power plant engineering. Primary emphasis on the operation and maintenance of boiler room equipment including steam cycling-condensing, related mathematics, boiler mountings and bracings, boiler operation, inspection and repair, chemistry of combustion and feedwater treatment. Satisfactory completion of the course is one of the requirements to qualify for the New York State Civil Service Fireman examination.
2 Class Hours, 1 Laboratory Hour

MET 152 Engineering Materials **4 Credits**
Physical and chemical properties of engineering materials. Mechanical tests, structure, phases, relationship and reactions within metallic and non-metallic structure.
4 Class Hours

MET 223 Manufacturing Processes II **2 Credits**
Further experience with indexing, spiral work, cams, cylindrical grinding.
2 Class Hours
Prerequisite: MET 122 Manufacturing Processes I

MET 235 Strength of Materials **3 Credits**
Normal and shear stress and strain, elastic and plastic deformation, torsion, stress in thin-walled cylinders, joints, shear force and bending moment in beams, beam stresses, beam deflection, multi-directional plane stress.
2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 132 Applied Mechanics

MET 238 Mechanical Design **4 Credits**
An analysis of machine motion and the design of machine elements. Analysis of motion of linkages and mechanisms for displacement, velocity and acceleration relationships. Design and analysis of weldments, fasteners, springs, power screws, couplings, shafts, clutches, gears and bearings.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MET 235 Strength of Materials

MET 241 Fluid Mechanics and Thermodynamics **3 Credits**
FLUID MECHANICS: Fluid statics and dynamics, steady flow energy equations, laminar and turbulent flow viscosity and fluid friction, flow measurement.

THERMODYNAMICS: Perfect gas law, specific heats, property and energy relationships in non-flow and steady flow processes for gases, internal combustion engine cycles, nozzles and diffusers, gas turbines.
2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 132 Applied Mechanics

MET 244 Thermodynamics **3 Credits**
Property and energy relationships in steady flow processes for vapors, power and refrigeration cycles, nozzles and diffusers. Heat transfer in plane and circular geometry, film coefficients, heat exchangers.
2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

MET 245 Energy Conservation **2 Credits**
Emphasis on developing an understanding of energy, its uses and the problems involved with its exploration, conversion and transmission. The influence of energy on man and his environment. A class tour to industries which have energy control devices and energy management programs.
1 Class Hour, 2 Laboratory Hours

MET 246 Refrigeration and Air Conditioning **3 Credits**
Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads, distribution systems, refrigeration systems, cooling load and air conditioning calculations, controls and control systems.
3 Class Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

MET 247* Air Conditioning and Refrigeration **3 Credits**
Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads. Thermodynamics and fluid flow concepts essential for satisfactory treatment of the above areas of study.
3 Class Hours
Prerequisite: PHY 141 Physics

MET 248 Fluid Power **3 Credits**
Static and dynamic fluid force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.
3 Class Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

MET 249* Fluid Power **3 Credits**
Fluid statics and fluid dynamics preceding a treatment of static and dynamic force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.
3 Class Hours
Prerequisite: MET 132 Applied Mechanics

***TAUGHT EVENINGS ONLY**

MET 252 Engineering Materials and Industrial Processes **4 Credits**
Properties, applications and processing of engineering materials including metallic, non-metallic, and composites.
3 Class Hours, 3 Laboratory Hours
Prerequisites: MET 121 Manufacturing Processes I and
MET 235 Strength of Materials

MET 253* Engineering Materials and Industrial Processes **3 Credits**
Properties, applications and processing of engineering materials including metallic, non-metallic and composite materials.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MET 121 Manufacturing Processes I and
MET 235 Strength of Materials

MET 255* Introduction to Plastics Engineering **3 Credits**
Basic concepts of chemical structure and the physical properties of thermoplastic and thermoset materials including additives in plastics, heat transfer and flow behavior of plastic melt, testing and property measurement, processing techniques with emphasis on extrusion and injection molding, defect analysis and troubleshooting, process control and instrumentation, material selection and application, commercial plastics, trade names, suppliers and prices.
3 Class Hours

MET 261 Engineering Statistics and Quality Control **3 Credits**
Measures of central tendency, variance, standard deviation, binomial distribution, normal distribution, statistical inference, hypothesis testing, confidence intervals, chi-square and students t-distribution, correlation and regression, similar elements of statistics as they pertain to engineering problems. Control chart analysis.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 141 College Algebra and Trigonometry or
MAT 139 Algebra

MET 272 Automotive Systems **3 Credits**
Functional elements of the automobile. The fuel system, ignition system, the engine cycle, pollution control system, the chassis and basic elements of engine tuneup.
2 Class Hours, 2 Laboratory Hours

MET 280* Management Decisions **2 Credits**
Objective criteria and evaluations in making management decisions. Currently accepted procedures to conceive management models and systems.
2 Class Hours

MET 285* Time, Motion and Wage Study **2 Credits**
Analysis of time spent and methods used for industrial tasks. Relation to wage structure on individual and plant-wide basis.
2 Class Hours
Prerequisite: MAT 139 Algebra

*TAUGHT EVENINGS ONLY

MET 286* Production Control **2 Credits**
Planning, scheduling and routing of goods through a plant from raw materials to finished products. Production control principles, the control of manufacturing processes.
2 Class Hours
Prerequisite: MAT 139 Algebra

MET 287 Plant Layout and Materials Handling **2 Credits**
Plant arrangement as it influences industrial operations. Assembling data, coordinating operations, developing operational layouts, evaluative arrangements. Materials handling requirements, planning and evaluation.
2 Class Hours
Prerequisite: MAT 139 Algebra

MET 295 Seminar **1-3 Credits**
An opportunity for the interested student to become involved with the process of research, formal paper preparation, formal delivery and defense of ideas presented. Also a critical evaluation of ideas set forth by others.
Prerequisite: As established by the Department Chairperson

MET 299 Independent Study **2-3 Credits**
The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.
Prerequisite: Approval of Department Chairperson

MEDICAL ASSISTANT

MDA 102 Medical Assisting Science **2 Credits**
Introduction to medical specialties and problems with related vocations. Responsibility of medical assistant to self, physician and patient. Introduction to professional ethics. Professional affiliation. For Medical Assistant students.
2 Class Hours

MDA 112 Standard First Aid and Personal Safety, Cardio-Pulmonary Resuscitation **1 Credit**
The causes, care and prevention of accidental/emergency life-saving situations. Mastery level of learning for the proficiency of basic skills. Cardiopulmonary resuscitation prepares students to recognize, evaluate and initiate care for cardiac emergencies. Certification by American Red Cross or American Heart Association.
2 Laboratory Hours

MDA 115 Medical Assisting Procedures **4 Credits**
Clinical procedures of medical assisting in the physician's office. Use and management of diagnostic instruments and equipment. Related patient care, professional ethics and nomenclature. For Medical Assistant students.
3 Class Hours, 2 Laboratory Hours
Prerequisite: MRT 105 Medical Terminology
or consent of instructor

MDA 201 Medical Assisting Procedures **4 Credits**
Laboratory introduction to microscopic analysis of blood and urine. Also simple blood chemistry tests in medical office. Study of formation of blood cells and urine. For Medical Assistant students.
2 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 132 Human Biology II

MDA 206 Medical Office Management **4 Credits**
Medical office administrative procedures, such as accounting principles and practices, patient health records, insurance forms, banking and postal services, payroll records, patient fees and ledger cards, office machines. Mechanics of applicable medical correspondence including letters, manuscripts. Emphasis on letters of inquiry and reply, claims and adjustment, credit and collection. For Medical Assistant students.
3 Class Hours, 3 Laboratory Hours
Prerequisites: MDA 102 Medical Assisting Science and MRT 107 Medical Transcription

MDA 208 Medical Law, Ethics and Economics **3 Credits**
Emphasizes the medical ethics which set the standards of conduct for physicians, as well as guidelines for medical assistants. Requirements to practice medicine, legal liabilities of the profession, and the importance of medicolegal consent forms. Various types of medical practices, fee determination, health insurance programs, and systems of health care delivery.
3 Class Hours

MDA 210 Pharmacology **2 Credits**
A practical course relevant to medical curriculums. Emphasizes knowledge of prescriptions and prescription writing. Basic principles of mathematics of pharmacy. Drugs governed by U.S.P. standards which are in common use and their generic-pharmaceutical relationship. Drug grouping and action relevant to human physiology. For Medical Assistant and Medical Record Technology students.
2 Class Hours
Prerequisite: BIO 132 Human Biology II

MDA 211 Medical Assisting Procedures **4 Credits**
Advanced technical procedures in medical assisting specifically oriented to the various medical specialties. Techniques of electrocardiography, audiometry and physical therapy. Field trips and practical experiences give additional background outside of the classroom. For Medical Assistant students.
2 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 132 Human Biology II

MDA 245 Directed Practice **5 Credits**
Directed practical experience in the physician's offices, medical centers, school health departments, rehabilitation clinics, and other health care institutions, weekly seminars. For Medical Assistant students.
1 Class Hour, 16 Laboratory Hours
Prerequisites: MDA 206 Medical Office Management and MDA 211 Medical Assisting Procedures.
MDA 201 Medical Assisting Procedures and MDA 210 Pharmacology must be taken previously or concurrently

MEDICAL LABORATORY TECHNOLOGY

MLT 111 Introduction to Clinical Laboratory Methods and Practices **2 Credits**
To acquaint the medical laboratory student with the history and scope of clinical laboratory medicine. Responsibility and professional ethics to self, employer, physician and patient. Field trips to clinical laboratory facilities. Basic clinical laboratory procedures and methodologies for urinalysis performed in laboratory sessions.
1 Class Hour, 2 Laboratory Hours

MLT 112 Hematology **3 Credits**
Anatomy and pathophysiology of the blood and hemopoietic tissue. Techniques and procedures for studying and evaluating blood in health and disease. Laboratory work includes specialized hematological techniques and procedures.
2 Class Hours, 4 Laboratory Hours
Prerequisite: MLT 111 Introduction to Clinical Laboratory Methods and Practices or permission of instructor

MLT 211 Clinical Chemistry I **4 Credits**
Principles and methods of analytical clinical chemistry applied to the physiochemical measurements of body function in health and disease. Emphasis on those chemical tests related to excretion, digestion, metabolism and protein synthesis. Laboratory work includes the related chemical tests and specialized analytical instrumentation.
2 Class Hours, 6 Laboratory Hours
Prerequisite: One year general chemistry and one year biology or permission of instructor

MLT 212 Clinical Chemistry II **4 Credits**
A continuation of MLT 211 Clinical Chemistry I. Emphasis on those chemical tests related to liver function, blood gases, pH and electrolyte balance, enzyme, hormones in health and disease. The laboratory work includes the specific related chemical test and specialized analytical instrumentation.
2 Class Hours, 6 Laboratory Hours
Prerequisite: MLT 211 Clinical Chemistry I or permission of instructor

MLT 222 Clinical Physiology **2 Credits**
Emphasis on the utilization of clinical laboratory testing methods in identifying diseases and dysfunction of cellular and body processes. The disordered biochemistry of the disease processes are studied from a case-oriented approach. The case studies cover diseases or dysfunction related to respiration, digestion, circulation, metabolism and excretion.
2 Class Hours
Prerequisite: Senior year status or permission of instructor

MLT 232 Blood Banking and Serology **3 Credits**
Introduction to blood banking. Blood typing, ABO, Rh, antiglobulin tests, crossmatching, incompatibilities resulting from pregnancies or transfusions. Selected serological diagnostic procedures and principles.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MLT 112 Hematology or permission of instructor

MLT 251 Microbiology II (Diagnostic) 4 Credits
A continuation of BIO 150 Microbiology I. Emphasis on infectious diseases, communicability, diagnosis and identification of causative organisms, including bacteriology and parasitology.
3 Class Hours, 4 Laboratory Hours
Prerequisite: BIO 150 Microbiology I or permission of instructor

MEDICAL RECORD TECHNOLOGY

MRT 101 Medical Record Science 3 Credits
Introduction to the history of medicine and the historical development of the health care field, with emphasis on the organizational structure of health institutions. Functions of a medical record department and overview of the professional association. Definition of, standards for, and development of a medical record as to content, format, evaluation and completion. A comprehensive review of the organization of the medical staff.
2 Class Hours, 2 Laboratory Hours

MRT 105 Medical Terminology I 2 Credits
Medical terminology as correlated with anatomical systems. Suffixes, prefixes, root words and use of the medical dictionaries. For Medical Assistant and Medical Record Technology students.
2 Class Hours

MRT 107 Medical Transcription 2 Credits
Designed to introduce the student to the knowledge and skills required for medical machine transcription in a health care facility. A practical experience in transcribing including proper format and a variety of medical reports.
4 Laboratory Hours
Prerequisite: MRT 105 Medical Terminology I

MRT 110 Medical Record Science 4 Credits
A study and application of the Problem Oriented Medical Record System. Purpose of classifying diseases and operations, difference between and historical development of nomenclature and classification systems. Value and use of indexes and registers. Numbering and filing systems and methods. Storage and retrieval systems.
2 Class Hours, 4 Laboratory Hours
Prerequisite: MRT 101 Medical Record Science

MRT 115 Medical Terminology II 2 Credits
A continuation of MRT 105 Medical Terminology I. Emphasis on terminology associated with the integumentary, musculoskeletal, nervous, special senses, cardiovascular, digestive, respiratory, genito-urinary and endocrine systems.
2 Class Hours
Prerequisite: MRT 105 Medical Terminology I

MRT 144 Directed Practice 4 Credits
Directed summer practical experience in the hospital medical record department. Development of insight and skills into the basic medical record procedures. Graduation requirement.
40 Laboratory Hours per week for 4 Weeks
Prerequisite: MRT 110 Medical Record Science

MRT 202 Medical Record Science 3 Credits
In-depth study of the Tumor Registry. Overview of ambulatory care, long term care and psychiatric facilities. In-depth treatment of basic hospital and vital statistics and application of the same.
2 Class Hours, 2 Laboratory Hours
Prerequisites: MRT 110 Medical Record Science and BIO 132 Human Biology II

MRT 208 Advanced Medical Transcription 2 Credits
Review of medical terminology emphasizing specialized terminology. Advanced medical transcription techniques through the use of recorded history and physical examinations, discharge summaries, consultation reports, operative reports and outpatient notes.
1 Class Hour, 2 Laboratory Hours
Prerequisite: MRT 107 Medical Transcription

MRT 210 Medical Record Science 3 Credits
Principles of management and the role of the supervisor in the medical record department. Developmental and operational phase of health information systems. Trends in health care delivery systems.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MRT 202 Medical Record Science

MRT 216 Clinical Practicum 1 Credit
Enables the students to utilize the knowledge and skills obtained in the classroom and directed practice assignments. Students perform the functions of an actual medical record department and use the computer terminal, microfilm equipment and medical transcription word processing center.
2 Laboratory Hours
Prerequisites: MRT 110 Medical Record Science and MRT 144 Directed Practice

MRT 222 Medical Legal Aspects 3 Credits
Introduction to legal aspects of medical records. Legal basis for medical practice, confidentiality. Patient's ''Bill of Rights,'' voluntary and involuntary release of medical information. Authorizations and consents, professional liabilities, medical-moral issues such as abortion, euthanasia, sterilization, artificial insemination.
3 Class Hours
Prerequisite: MRT 110 Medical Record Science

MRT 236 Medical Care Evaluation 2 Credits
Three components of medical care evaluation—admission, concurrent review and retrospective review of patient records, audited by the medical record technician. Federal and state regulations.
2 Class Hours, 1 Laboratory Hour
Prerequisite: MRT 110 Medical Record Science

MRT 245 Directed Practice 4 Credits
Directed practice experience in the hospital and related affiliation sites. Correlated with MRT 210 Medical Record Science to develop insight and skills into advanced medical record procedures.
16 Laboratory Hours
Prerequisites: MRT 202 Medical Record Science and MRT 144 Directed Practice

MRT 295 Medical Record Seminar **2 Credits**
Detailed study and analysis of specific problems encountered in the administration of a medical record department. Correlated with directed clinical practice. Case study and extensive literature review.
2 Class Hours

MUSIC

MUS 101 Fine Art: Introduction to Music **3 Credits**
Basic elements of music common to all forms of musical expression. Emphasis on developing listening habits, which bring the student to an informed awareness and understanding of music. Attendance at concerts and recitals.
3 Class Hours

MUS 105 Music Theory I **3 Credits**
A beginning course in music theory, including basic rudiments of music. Pitch and rhythmic notation, scales and intervals. Ear training through melodic and rhythmic drills and dictation.
3 Class Hours

MUS 106 Music Theory II **3 Credits**
Continuation of Music Theory I. Traditional harmony, exercises in melodic, rhythmic and harmonic dictation, aural analysis, beginning composition.
3 Class Hours
Prerequisite: MUS 105 Music Theory I or consent of instructor

MUS 110 17th and 18th Century Music **3 Credits**
Music and musical styles of the 17th and 18th Centuries. Emphasis on the composers and their styles and the relationship of music to the social, political and other cultural reforms of the period.
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 111 19th Century Music **3 Credits**
Important musicians and musical styles of the Romantic Period. Emphasis on developments in piano literature, the symphony orchestra and opera. Listening to selected recordings and attendance at local concerts.
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 112 20th Century Music **3 Credits**
Important musicians and musical styles in the 20th Century. Emphasis on the trends and development of music in America. Leading European composers.
3 Class Hours
Prerequisite: MUS 101 Introduction to Music or consent of instructor

MUS 190 The College Choir **1 Credit**
Students who sing in the College Choir receive one credit per semester. See page 28.

MUS 191 Broome Community College Music Performance **1 Credit**
Students who participate in the recitals or concerts of the academically-associated Broome Community College Music Performance groups receive one credit per semester. See page 28.

MUS 299 Independent Study: Music **1-3 Credits**
An individual student project concerned with advanced work in a specific area of music. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in music

NURSING

ADN 100 Meeting Basic Human Needs **7 Credits**
Introduction to nursing concepts and principles. The total human being incorporating biophysiological and psychosocial components. Emphasis on maintaining homeostasis within the illness/wellness continuum. The needs approach, based on Maslow's Hierarchy of Human Needs, is emphasized. Skills in providing safe bedside nursing care, such as simple treatments, pharmacology and basic nutrition. Integrating knowledge of communication skills, nursing process, problem solving, mental mechanisms, normal responses to stress, crisis intervention, body responses to pathology. Adaptation of nursing intervention directed toward meeting basic needs of the chronically ill, the aging and those individuals facing death.
5 Class Hours, 6 Laboratory Hours

ADN 101 Nursing Care During the Life Cycle **7 Credits**
The Life Cycle from conception to middle-age. Correlating basic human needs and the developmental tasks in each age group. The family cycle, as one of the tasks of the young adult. Emphasis on preparation for parenthood, the experience of parenthood, and the psychosocial implications of the young family. Learning principles identified and incorporated into the nursing process. Situational and maturational crises as normal aspects of the life cycle. Adaptation of nursing intervention directed toward meeting basic needs of the middle aged. Nursing intervention for diagnostic testing.
5 Class Hours, 6 Laboratory Hours
Prerequisites: ADN 100 Meeting Basic Human Needs

ADN 203 Immobility Concepts **4 Credits**
The nursing process as it meets the needs of individuals experiencing complex physiological and psychological problems due to immobility. Concepts of neurological, orthopedic and sensory deprivation nursing. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.
(Half Semester)
5 Class Hours, 9 Laboratory Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II

ADN 204 Regulatory Concepts **4 Credits**
The nursing process is applied to the needs of individuals with disturbances of the regulatory physiological mechanisms. Content includes nursing concepts of stress, fluids and electrolytes, endocrinology. Related health behavior and teaching. Extended campus laboratory experience is correlated. Successful achievement in the extended laboratory is required.
5 Class Hours, 9 Laboratory Hours
Prerequisites: ADN 101 Nursing Care During Life Cycle and
BIO 132 Human Biology II

ADN 205 Psychological Concepts I **2 Credits**

The nursing process as it meets the needs of individuals experiencing psychological stress. Psychiatric nursing concepts applied to behavioral disturbances. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

5 Class Hour, 9 Clinical Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 206 I, I and O Concepts **4 Credits**

The nursing process as it meets the needs of individuals with complex physiological and/or psychological stress due to problems of inflammation, infection and obstruction. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

5 Class Hours, 9 Clinical Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle, ADN 203 Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205 Psychological Concepts I, BIO 132 Human Biology I and BIO 150 Microbiology.

ADN 207 Oxygenation Concepts **4 Credits**

The nursing process is applied to needs of individuals experiencing disturbances of oxygenation. Broad concepts applied to problems of the hemopoietic, respiratory, vascular and cardiac systems. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

5 Class Hours, 9 Clinical Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle, ADN 203 Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205 Psychological Concepts I and BIO 132 Human Biology II.

ADN 208 Psychological Concepts II **2 Credits**

Continued application of the nursing process as it meets the needs of individuals experiencing psychological stress. Content includes psychiatric concepts applied to behavioral changes. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

1 Class Hour, 3 Laboratory Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle, ADN 203 Immobility Concepts, ADN 204 Regulatory Concepts, ADN 205 Psychological Concepts I and BIO 132 Human Biology II.

ADN 296 Nursing Seminar I **1 Credit**

Seminar discussions and role playing exercises explore, in detail, decision making, values clarification and the setting of priorities within the context of clinical nursing situations. Emphasis on clinical accountability and the management of multiple patient care situations.

2 Seminar Hours

Prerequisites: Successful completion of all previous program requirements

ADN 297 Nursing Seminar II **1 Credit**

A broad survey course examining the effects of a changing society upon the delivery of health care. Licensure and nursing practice issues. The National League for Nursing achievement tests used as a guide for the individuals' preparation for licensure.

2 Seminar Hours

Prerequisites: Successful completion of all previous program requirements

ADN 298 Nursing Practicum **2 Credits**

Emphasis during the clinical practicum on the application of the concepts explored in Nursing Seminar I in selected clinical placements (days, evenings or nights) under the guidance of an assigned preceptor. This experience is designed to facilitate the role change transition from student to potential employee.

Prerequisites: Successful completion of all previous program requirements

PARALEGAL ASSISTANT

Practically all Paralegal Assistant courses are taught in the evening only.

PLA 100 Introduction to Paralegal Profession I **3 Credits**

Local, state and federal courts, introduction to jurisprudence and administrative agencies and their functions and procedures. Introduction to contract, tort, negligence, criminal, criminal procedure and real property law. Legal terminology. (Formerly LGS 100).

3 Class Hours

PLA 101 Introduction to Paralegal Profession II **3 Credits**

Role of the paralegal and the lawyer, with emphasis on the duties and obligations of each, including management, accounting, records, documents, equipment and research techniques. Legal terminology. (Formerly LGS 101).

3 Class Hours

PLA 102 Introduction to Paralegal Profession III **3 Credits**

Comprehensive study of family, surrogate, wills and estates, agency and partnership, bankruptcy, corporate law, commercial paper and workmen's compensation law, including procedures and practices of each. Legal terminology. (Formerly LGS 102).

3 Class Hours

PLA 200 Real Property Law **3 Credits**

Comprehensive survey of law of real property emphasizing practical application to a paralegal function. Analysis of forms of deeds, bonds, notes, mortgages, assignments, discharges, purchase of contracts, leases, options. Training in searching title, basic understanding of abstracts of title, real property litigation, estates, condemnation and foreclosure.

3 Class Hours

PLA 205 Techniques of Research **3 Credits**

Development of research skills through the use of digests, encyclopedias, reporter systems and practice manuals. Arrangement, use and maintenance of a law library (including the Supreme Court Library). All legal references, for assistance in diverse phases of law and the operation of those agencies and institutions. (Formerly LGS 200).

3 Class Hours

Prerequisite: PLA 100 or 101 or 102 Introduction to Paralegal Profession or 2 years experience in a law office.

PLA 210 Legal Drafting **3 Credits**

Analysis of legal documents for writing style, clarity of meaning, conciseness, various types of composition of formal and informal letter writing, memos, reports. Refinement of basic communication skills.

3 Class Hours

Prerequisite: ENG 110 Written Expression I

PLA 215 Estates, Probates and Trusts **3 Credits**
Disposition of decedent's property, law of intestate succession, execution and probate of wills, nature and creation of trusts and the administration of estates and trusts, estate and gift tax preparation.
3 Class Hours

PLA 220 Contracts **3 Credits**
The law of contracts, their historical significance, formation, validity, interpretation, transfer of contractual rights. Assignment, third party beneficiaries, discharge, breach and remedies. (BUS 118 Business Law I may be substituted.
3 Class Hours

PLA 225 Family Law **3 Credits**
Pleadings relative to the general practice of law in relationship to the family unit. Laws relating to marriage, divorce, annulment, custody and support, adoption, name change, guardianship, paternity. Written pleadings and necessary research pertaining to these aspects of family law.
3 Class Hours

PLA 226 Taxation Law for Paralegals **3 Credts**
Principles of federal taxation, analysis of IRS code and related case law, emphasis on law and concepts of taxation, basic and advanced tax law terminology, litigation involving the IRS. Exploration of social changes and factors involving tax problems, current issues in tax reform, perspective of the paralegal regarding resolution of tax disputes.
3 Class Hours

PLA 230 Domestic Relations **1 Credit**
The marriage contract, spouses' rights and obligations, void marriage, voidable marriage, annulment, separation, divorce, support, alimony and custody of children.
1 Class Hour

PLA 240 Corporate Law **1 Credit**
Types, uses and organization of the corporation, antitrust and securities law, mergers and consolidation, liquidation and dissolution.
1 Class Hour

PLA 250 Municipal Law **1 Credit**
Structure and operations of local government in New York State. Evolution of local government in New York during the first two centuries of its existence. Laws, ordinances and operations.
1 Class Hour

PLA 260 Labor-Management Relations (Labor Law) **1 Credit**
Labor-management relations in the public and private sectors. Taft-Hartley Act, National Labor Relations Act and Wagner Act, unfair labor practices, labor contracts, arbitration and mediation, availability of injunctions in labor disputes.
1 Class Hour

PLA 270 Vehicle and Traffic Law **1 Credit**
Regulations of traffic within the State of New York. Emphasis on violations and traffic-related misdemeanors resulting from violation of the rules of the road and court proceedings resulting therefrom.
1 Class Hour

PLA 280 Litigation and Trial Preparation **1 Credit**
Intake procedures, systems and analysis, concepts of jurisdiction and venue, parties to an action, pleadings, pre-trial procedures, motions and special practice, special proceedings, trials, judgments and appeals.
1 Class Hour

PLA 290 Landlord-Tenant Relations **1 Credit**
Problems faced by landlords and tenants, private housing, live-in arrangements, covenants, leases, warranties. Tenant and landlord rights and obligations.
1 Class Hour

PLA 299 Independent Study: Paralegal **1-3 Credits**
An individual student project in paralegal studies which is beyond the scope or requirements of the courses offered by the program. Conducted under the direction of a faculty member or attorney, and approved by the program coordinator.
Prerequisites: PLA 100, 101, 102 Introduction to Paralegal Profession I, II, III plus three additional hours in a 200 level PLA course

PHILOSOPHY

PHI 102 Introduction to Philosophy **3 Credits**
Meaning of philosophy, suggestions for reading philosophy, informal logic, methodology and basic philosophical terms including idealism, dualism, naturalism.
3 Class Hours

PHI 103 Philosophy of Mind **3 Credits**
Theories of major philosophers as to the nature and limits of human knowledge and the nature of reality. Problem of knowledge of the physical world, the mind-body problem, free-will problem, existentialist's view of man. PHI 102 Introduction to Philosophy recommended as a prerequisite.
3 Class Hours

PHI 104 Philosophy of Religion **3 Credits**
Relation of religion and philosophy and an investigation of different concepts of God. Analysis of religious types and experiences, different attempts to justify religious beliefs. Investigation of the logic of religious experience through an analysis of the leading ideas in the philosophy of religion both as an historical and contemporary phenomenon. PHI 102 Introduction to Philosophy recommended as a prerequisite.
3 Class Hours

PHI 111 Humanities **3 Credits**
Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Classical, Medieval, Renaissance and Metaphysical Periods.
3 Class Hours

PHI 112 Humanities **3 Credits**
Critical analysis of human development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Neoclassical, Romantic, Victorian, Early Modern and Late Modern Periods.
3 Class Hours

PHI 113 Humanities I **4 Credits**
A critical analysis of mankind's development from the early beginnings to the present through a thematic investigation of literature, philosophy, history and the arts. Classical, Medieval, Renaissance and Metaphysical Periods. For students in the Liberal Arts Honors Program, and others with permission.
4 Class Hours

PHI 114 Humanities II **4 Credits**
A critical analysis of mankind's development from the early beginnings to the present state through a thematic investigation of literature, philosophy, history and the arts. Neo-classical, Romantic, Victorian, Early Modern and Late Modern Periods. For students in the Liberal Arts Honors Program, and others with permission.
4 Class Hours

PHI 120 Verbal Reasoning **3 Credits**
To improve the students' ability in reasoning. Concentration on qualification, symbols, ambiguity, analysis and semantics. (Not offered in 1981-82 academic year).
3 Class Hours

PHI 201 Ethics: Moral Philosophy **3 Credits**
Main classical and modern ethical theories, including such theorists as Plato, Aristotle, Spinoza, Mill, Kant, Moore, Toulmin, Ayer, Westermarck. Comparison and contrast of normative and meta-ethical theories, the good life and how one should act, the meaning of moral judgments and the criteria of validity, justification of moral beliefs and the grounds of moral responsibility. PHI 102 Introduction to Philosophy recommended as a prerequisite.
3 Class Hours

PHI 202 Logic **3 Credits**
Analysis and practical application of the elements of logic as they apply to thinking on both a linguistic and formal level. Forms of argument, informal and formal fallacies, significance of the emotions on decision making, inductive and deductive processes. Symbolizing arguments and formal proofs of validity.
3 Class Hours
Prerequisite: Any Philosophy (PHI) course or any mathematics (MAT) course numbered MAT 139 or higher

PHI 206 Social and Political Philosophy **3 Credits**
A philosophical study of the social/political organization of society through an examination of such topics as justice, authority, leadership, individual rights, and of the relationship between the state and various social institutions, such as family, business, church, and education.
3 Class Hours

PHI 299 Independent Study: Philosophy **1-3 Credits**
An individual student project concerned with advanced work in a specific area of philosophy. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in philosophy

PHYSICAL EDUCATION

Practically all of the Physical Education courses are half a semester in length. For the most part, the courses that take place outdoors are given in the first half of the fall semester or the second half of the spring semester; those courses that occur indoors are given in the second half of the fall semester or the first half of the spring semester.

PED 100 Archery **½ Credit**
Fundamentals of shooting—seven-step approach. Proper target shooting technique and form stressed.
4 Class Hours, 11 Laboratory Hours per half semester

PED 103 Backpacking **1 Credit**
A series of laboratories and lectures culminating in a four-day backpacking trip. Students learn to select, care for, and use properly the essential equipment, as well as some low cost alternative to expensive items. The stress is on safety and low ecological impact camping.
15 Class Hours, 15 Laboratory Hours per semester

PED 106 Badminton **½ Credit**
Instruction and practice in the various strokes. Rules, terminology and equipment. Strategy for singles and doubles.
4 Class Hours, 11 Laboratory Hours per half semester

PED 109 Basketball **½ Credit**
Instruction and practice in the fundamental skills of passing, dribbling, shooting and defense. History, rules, tactics, and team play. Basketball as a carry-over sport. (Not offered in 1981-82 academic year).
4 Class Hours, 11 Laboratory Hours per half semester

PED 112 Bowling **½ Credit**
Bowling fundamentals including ball selection, grip, stance, approach and delivery. Etiquette, scoring, correction of basic mistakes in delivery. Classes are at off-campus site and students must pay for own games, shoe rental and transportation.
3 Class Hours, 12 Laboratory Hours per half semester

PED 115 Circuit Training and Conditioning **½ Credit**
A general physical conditioning class. Each student is pre-tested and then establishes his/her individual program. A selected battery of exercises (circuit) is utilized with some individual choice.
3 Class Hours, 12 Laboratory Hours per half semester

PED 118 Field Hockey **½ Credit**
Basic skills needed for good competition in game situations. Emphasis on rules and responsibilities of each position on the team. Organized competition within the class.
4 Class Hours, 11 Laboratory Hours per half semester

PED 121 Golf **½ Credit**
Skills, rules, etiquette and strategy. Students required to play nine holes, providing their own transportation and greens fees. Clubs provided for those without.
4 Class Hours, 11 Laboratory Hours per half semester

PED 127 Jogging **½ Credit**
Jogging as a possible leisure time activity. Physiological and psychological benefits, improvement of technique and basic principles of training. Individual works at own level and sets own goals. Distance usually worked: 2 miles.
3 Class Hours, 12 Laboratory Hours per half semester

PED 130 Judo/Karate **1 Credit**
Classical karate on the beginning and intermediate levels. Philosophy and brief history of karate. Basic katas (forms) together with pre-arranged sparring techniques. Free sparring with no body contact. Emphasis on physical conditioning and mental discipline.
6 Class Hours, 24 Laboratory Hours per semester

PED 139 Self Defense **½ Credit**
Brief explanation of karate, judo and other martial arts. Approximately 10 basic self-defense movements which, if properly acquired and practiced, can be applicable to many situations. Basic techniques of throwing, blocking, falling, punching and general body shifting motions. No definite dress required. A student should remember that exercises are meant to increase flexibility and endurance of muscles, and the dress should be a comfortable one for this purpose. Although this is not the formal karate class, the class will be conducted with formality and discipline.
3 Class Hours, 12 Laboratory Hours per semester

PED 142 Skiing **½ Credit**
Instruction and practice in all phases of skiing (beginning through advanced). Conduct, terminology, safety and equipment. Basic racing technique demonstrated and practiced where sufficient skill level and interest are indicated. Classes at an off-campus site; students must pay necessary fees and provide their own transportation.
3 Class Hours, 12 Laboratory Hours per half semester

PED 143 Ski Touring **½ Credit**
Instruction and practice in cross-country skiing—beginning through advanced. Conduct, terminology, safety and equipment. Classes both on and off campus. Skis, poles, bindings provided; students responsible for boots and transportation.
3 Class Hours, 12 Laboratory Hours per half semester

PED 145 Slimnastics **½ Credit**
Exercises for all muscles of the body. Duration of each exercise and number of exercises used during the class hour gradually increased. Music used for intensive exercise routines.
4 Class Hours, 11 Laboratory Hours per half semester

PED 148 Soccer **½ Credit**
Instruction and practice in the fundamental skills of kicking, tackling, trapping, dribbling and heading. Rules and tactics. Team competition.
4 Class Hours, 11 Laboratory Hours per half semester

PED 154 Speedball **½ Credit**
A combination team sport involving skills common to soccer, basketball and football. Development of skills, rules and strategy of the game. Speedball is a fast moving, quick thinking game.
4 Class Hours, 11 Laboratory Hours per half semester

PED 169 Tennis **½ Credit**
Instruction and practice in the basic strokes—forehand, backhand, serve and volley. Rules, terminology and equipment. Strategy for singles and doubles.
4 Class Hours, 11 Laboratory Hours per half semester

PED 172 Volleyball **½ Credit**
A basic course in the fundamentals of power volleyball. Team strategy, history and rules. Drills and competitive play.
4 Class Hours, 11 Laboratory Hours per half semester

PED 175 Weight Training **½ Credit**
Individualized work on weight machine. Student selects activities along with instructor's guidance. Emphasis on improvement of weaknesses and a balanced approach. Physical fitness, principles of training. (Not offered in 1981-82 academic year).
3 Class Hours, 12 Laboratory Hours per half semester

PED 299 Independent Study **½ or 1 Credit**
Student undertakes a project of own choice with guidance from faculty member. The project is intended for a student who has completed requirements.
Prerequisite: 2 Semester Hours in Physical Education

PHYSICAL SCIENCE

PHS 111 Physical Science for Today **3 Credits**
Beginnings of astronomy, the earth and moon, planets and satellites, the sun and other stars, cosmology. Chemistry of our atmosphere, weather and methods of modification, water cycle and pollution. Composition of the earth's crust, erosional processes, earthquakes and volcanoes, plate tectonics, nuclear radiation, man and his environment. Required field trips supplement classroom experience.
2 Class Hours, 2 Laboratory Hours

PHS 113 Physical Science—Astronomy **4 Credits**
The Copernican and Ptolemaic models of the solar system. The planets, sun, moon and comets. Stellar magnitudes and evolution of stars. The size and age of the universe and modern developments in astronomy and cosmology. Required field trips supplement classroom experience.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003B Basic Mathematics Review or equivalent

PHS 114 Physical Science — Meteorology **4 Credits**
The atmosphere—composition, circulation, energy transfer, observations and instrumentation used. Weather phenomena—air masses, weather patterns, severe weather and optics. Forecasting through observations and plotting. Introduction to climatology, the control and classification of climates based upon principles of meteorology. Required field trips supplement classroom experience.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003B Basic Mathematics Review or equivalent

PHS 115 Physical Science—Geology **4 Credits**
Crystals, minerals, rocks—their structure and identification. Erosion of the crust, its uplift and deformation. Earthquakes and the interior of the earth, geologic dating and the physical history of the earth. Plate tectonics and continental drift, ecology from a geologic viewpoint. Required field trips supplement classroom experience.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003B Basic Mathematics Review or equivalent

PHS 116 Physical Science—Environment **4 Credits**

Basic physical principles and the role of these principles in understanding and appreciating the problems of the environment. Problems of pollution and depletion of natural resources. Application of physics in the everyday world. Required field trips supplement classroom experience.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003B Basic Mathematics Review or equivalent

PHYSICS

PHY 100, 101 Preparatory Physics I and II **4, 4 Credits**

Composition and resolution of vectors. Statics and dynamics. Conservation laws, wave motion, sound and light. Thermodynamics, electricity and magnetism. The physics of the atom.
4 Class Hours each
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHY 117 Physics **3 Credits**

Vectors, linear motion, energy, momentum, electric fields, potential difference, Ohm's law, d-c circuits, motion of charges in magnetic fields, electromagnetic induction. Mirrors and lenses, nature of light, atomic structure, production of X-rays, radioactive decay, nuclear reactions, interaction of radiation with matter, radiation detection, radiation protection standards.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHY 141 Physics **4 Credits**

Composition and resolution of vectors, forces in equilibrium, moments of forces, elasticity, linear and projectile motion, forces and motion, rotation, work and energy, impulse and momentum, harmonic motion, fluid mechanics, temperature, thermal expansion, heat. For Engineering Technology students.
3 Class Hours, 2 Laboratory Hours
Corequisite: MAT 141 College Algebra and Trigonometry or equivalent

PHY 142 Physics **4 Credits**

Thermodynamics, thermal properties of gases, wave motion and sound, electrostatics, direct current, magnetism, electromagnetic induction, alternating current, electromagnetic radiation, illumination, reflection and refraction of light, mirrors and lenses, optical instruments, diffraction, nuclear energy. For Engineering Technology students.
3 Class Hours, 2 Laboratory Hours
Prerequisite: PHY 141 Physics

PHY 144 Physics II-E **4 Credits**

Thermodynamics, wave motion and sound, photometry, reflection, refraction, dispersion, light, mirrors and lenses, optical instruments, diffraction, lasers, electrostatics, potential, current, resistance, magnetics, semiconductor theory. For Electrical Technology students.
3 Class Hours, 2 Laboratory Hours
Prerequisite: PHY 141 Physics, EET 121 Electrical Circuits

PHY 161 Physics **4 Credits**

Structure and language of physics. Standard units of measurement of length, mass and time. Basic mathematical foundation: elementary trigonometry, vector algebra, powers of ten and significant figures. Mechanics: motion, Newton's Laws, work, energy and momentum principles, rotation. Waves and wave phenomena, mirrors and lenses, optical instruments, sound. First course in an introductory non-calculus sequence. For Liberal Arts students who need a laboratory science.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 141 College Algebra and Trigonometry or equivalent

PHY 162 Physics **4 Credits**

Concepts of heat and temperature, kinetic theory, thermodynamics. Electricity and magnetism: electrostatics, electrical circuits, electromagnetic phenomena. Modern physics: relativity, quantum theory, atomic structure radioactivity. Second half of introductory physics course for Liberal Arts students who need a laboratory science.
3 Class Hours, 3 Laboratory Hours
Prerequisite: PHY 161 Physics

PHY 181 Engineering Physics I **4 Credits**

Vectors, equilibrium, kinematics, Newton's Laws of Motion, centripetal force, work and energy, impulse and momentum, rotation, elasticity, harmonic motion, hydrostatics and hydrodynamics.
3 Class Hours, 2 Laboratory Hours
Corequisite: MAT 163 Calculus with Analytic Geometry I or
MAT 171 Engineering Calculus with Analytic Geometry I

PHY 182 Engineering Physics II **4 Credits**

Relativistic mechanics, Coulomb's Law, electrostatic field, potential, capacitance, direct currents, magnetic force on currents, magnetic field of a current, induced emf, inductance, alternating currents.
3 Class Hours, 2 Laboratory Hours
Prerequisite: PHY 181 Engineering Physics I
Corequisite: MAT 164 Calculus with Analytic Geometry II or
MAT 172 Engineering Calculus with Analytic Geometry II

PHY 281 Engineering Physics III **3 Credits**

Wave motion, sound, temperature, calorimetry, heat transfer, elementary thermodynamics, kinetic theory, geometrical optics, optical parts and instrumentation, physical optics, interferometry and polarization.
3 Class Hours
Prerequisites: 1 year of calculus and PHY 181 Engineering Physics I or equivalent

PHY 282 Engineering Physics IV **3 Credits**

Quantum description of waves and particles, Bohr's model of atomic structure, Schroedinger's equation, X-rays, quantization of angular momenta, atomic spectra, introduction of solid state physics, nuclear radiation detection instruments, nuclear force, binding energy of stable nuclei, radioactive decay, low energy nuclear reactions, neutrons, fission, fusion.
3 Class Hours
Prerequisites: 1 year of calculus and PHY 182 Engineering Physics II

POLITICAL SCIENCE

POS 201 Introduction to American Government **3 Credits**
American political institutions, processes and behavior. The relationships among cultural, legal and social aspects of the political system. Structure, organization and function of political parties, pressure groups and mass media. Application to contemporary issues and events.
3 Class Hours

POS 203 International Relations **3 Credits**
Basic concepts and principles of world politics. International conflict resolution, international organizations, the struggle for power. Factors affecting the relationships among the major powers. Role of diplomacy, alliances, war and peace in the world arena.
3 Class Hours

POS 204 American State and Local Government **3 Credits**
Theory and practice of state and local government, utilizing a problem-solving or ''policy'' approach. Students are encouraged to explore in depth the workings of city and county governments locally.
3 Class Hours

POS 299 Independent Study **1-3 Credits**
An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson.
Prerequisite: 3 semester hours of political science

PSYCHOLOGY

PSY 100 Psychology of Personal Adjustment **3 Credits**
Investigation of bio-cultural factors which influence human behavior and study of the development of well-adjusted personality. Attention is directed to the learning and thinking the individual employs in solving personal problems in everyday living. (This course cannot be used as a prerequisite for other psychology courses.)
3 Class Hours

PSY 103 Psychology of Adulthood **3 Credits**
Investigation of the continuity-change pattern that characterizes normal adulthood (20 to 60 years). Identification of individual responses to life crises. Introduction to skills that facilitate meeting self-selected goals and skills that assist others to fulfill their goals.
3 Class Hours

PSY 110 General Psychology **3 Credits**
Definition and description of psychology. Functions of the neural system, sensation and perception, learning, memory, motivation, emotion, conflict and frustration, personality, social psychology. Methods and statistical applications, history and fields of psychology.
3 Class Hours

PSY 150 to 200 Special Topics in Psychology **1 Credit**
Topics of interest to a (class size) group will be explored. Prospective students should make their request at least three weeks before the end of the preceding semester. Possible topics, for example, could include stress management or child rearing styles.

PSY 211 Child Development **3 Credits**
The growth, maturation and development of children, including mental and motor phases, learning, motivation and personality formation.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 212 Adolescent Development **3 Credits**
The adjustment processes necessary for the child to become an adult. Development of socialization, personal goals and enlargement of self-concept. Formative influences of social institutions and environmental elements relative to the growth of the individual.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 214 Abnormal Psychology **3 Credits**
Description and criteria for normal and abnormal personality. Dynamic processes of adjustment, the coping process. Definition and description of sociopathic, psychopathic, neurotic and psychotic behavior. Development of both functional and organic disorders.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 217 Counseling and Interviewing **3 Credits**
Varied methods of interviewing and counseling, group dynamics employing current theories, situational examples and means for determination of method to be used. Practical cases in social services, clinics, hospitals and educational institutions. Overall training and personality of the counselor.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 223 Intelligence and the Mentally Retarded **3 Credits**
The several meanings of the concept of intelligence, distribution of intelligence in populations, development and organization of intelligence at different levels, concepts of retardation. The various levels and causations of retardation, development at all chronological ages, learning and employment expectations, methods of assisting with behavioral improvement, cooperative social agencies.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 227 Behavior Modification **3 Credits**
Principles of behavior modification using classical and operant techniques. Practical applications of these principles to the fields of child care, psychotherapy and correctional institutions.
3 Class Hours
Prerequisite: PSY 110 General Psychology

PSY 299 Independent Study **1-3 Credits**
An individual student project in psychology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: PSY 110 General Psychology plus 3 additional hours in a 200 level PSY course

RADIOLOGIC TECHNOLOGY

RAD 100 Introduction to Radiologic Technology 2 Credits

Part I Overview of radiologic technology through the study of its historical development, its placement in the medical field today, the organization of a modern radiology department, professional ethics, and medicolegal aspects of radiology.

Part II Introduction and orientation to the radiology department in an affiliated hospital.

First half semester, 2 Class Hours
Second half semester, 16 Laboratory Hours

RAD 101 Radiologic Technology I 3 Credits

A modular approach to radiation protection, recording media, film processing, radiographic quality, radiographic accessories.

3 Class Hours, 1 Laboratory Hour

RAD 102 Radiologic Technology II 3 Credits

A modular approach to radiologic mathematics, advanced study of radiographic quality, preparation of technique charts, sensitometry and mobile radiography.

3 Class Hours
Prerequisite: RAD 101 Radiologic Technology I or permission of instructor

RAD 103 Positioning I 1 Credit

Instruction and practice in radiographic positioning of the axial skeleton.

3 Laboratory Hours
Prerequisite: RAD 131 Clinical Education I

RAD 104 Positioning II 1 Credit

Instruction and practice in radiographic positioning of the axial skeleton.

3 Laboratory Hours
Prerequisite: RAD 131 Clinical Education I

RAD 110 Methods of Patient Care 2 Credits

Patient care procedures routinely used in the department of radiology. Understanding the basic procedures utilizing contrast media. Basic medical terminology for the student radiographer. Certification in CPR (Cardio Pulmonary Resuscitation) is a requirement for passing the course.

1 Class Hour, 2 Laboratory Hours

RAD 131 Clinical Education I (Winterim)

Clinical assignment devoted to observation and application of elementary radiographic procedures under direct supervision in a cooperating hospital. (Successful achievement is a graduation requirement.)

2 Weeks of instruction
Prerequisites: BIO 131 Human Biology I and RAD 100 Introduction to Radiologic Technology and RAD 110 Methods of Patient Care or permission of instructor.

RAD 132 Clinical Education II 2 Credits

Observation and clinical experience for the development of competency involving elementary radiographic procedures in an affiliated hospital.

16 Laboratory Hours
Prerequisite: RAD 131 Clinical Education I (Winterim) or permission of instructor

RAD 133 Clinical Education III (Summer Term I) 3 Credits

Clinical experience for the development of competency involving general radiographic procedures in an affiliated hospital.

40 Laboratory Hours
Prerequisite: RAD 132 Clinical Education II and BIO 132 Human Biology II or permission of instructor

RAD 203 Positioning III 1 Credit

Laboratory instruction and practice in positioning techniques involving the skull and facial bones.

3 Laboratory Hours
Prerequisite: RAD 133 Clinical Education III or permission of instructor

RAD 210 Radiologic Physics 4 Credits

Physics of radiographic equipment, including fundamental electronics, X-ray production, the X-ray tube and related circuitry, and preventive maintenance.

4 Class Hours
Prerequisite: PHY 117 Physics or permission of instructor

RAD 216 Imaging Modalities 1 Credit

Introduction to the principles of computerized axial tomography, nuclear medicine and ultrasound.

1 Class Hour
Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 220 Radiologic Pathology 2 Credits

A presentation of the various medical and surgical diseases and their relationship to radiographic procedures.

2 Class Hours
Prerequisite: BIO 132 Human Biology II or permission of instructor

RAD 225 Special Radiographic Procedures 4 Credits

Introduction to radiographic examinations involving surgical procedures and specialized equipment.

3 Class Hours, 2 Laboratory Hours
Prerequisite: RAD 230 Clinical Education IV or permission of instructor

RAD 230 Clinical Education IV 2 Credits

Practical application of advanced positioning techniques with emphasis on the skull and facial bones.

16 Laboratory Hours
Prerequisite: RAD 133 Clinical Education III (Summer) or permission of instructor

RAD 231 Clinical Education V (Winterim II)

Clinical assignment devoted to the application of radiographic procedures under direct supervision in a cooperating hospital. (Successful achievement is a graduation requirement.)

2 Weeks of Instruction
Prerequisite: RAD 230 Clinical Education IV or permission of instructor

RAD 232 Clinical Education VI 2 Credits

Practical application of advanced radiographic procedures under direct supervision in an affiliated hospital.

16 Laboratory Hours
Prerequisite: RAD 231 Clinical Education V (Winterim) or permission of instructor

RAD 233 Clinical Education VII **3 Credits**
Clinical experience for the development of competency.
40 Laboratory Hours

RAD 245 Radiobiology **2 Credits**
Radiobiology and advanced radiation protection procedures related to diagnostic and therapeutic uses of radiation.
2 Class Hours
Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 250 Quality Assessment **2 Credits**
The basic principles and techniques of quality assurance testing presented and illustrated through laboratory experiments. Major emphasis on the tests and measurements used to analyze imaging systems with minimum information loss.
2 Class Hours, 1 Laboratory Hour
Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 295 Seminar in Radiography **2 Credits**
Preparation of the technical report and its organization for both written and oral presentation. Readings in current literature and journals.
2 Class Hours
Prerequisite: Senior Year Status

READING AND STUDY SKILLS

RDG 090 Reading Fundamentals **3 Credits**
Individual diagnosis of a student's reading strengths and weaknesses, development and implementation of a program to upgrade basic skills. Content to vary with individual students. (This course cannot count for credit toward a degree).
2 Class Hours, 2 Laboratory Hours

RDG 100 College Reading **3 Credits**
An individualized course emphasizing vocabulary expansion, inferential and critical comprehension, and flexible rate. Instruction and practice in the application of reading skills to specific content areas. (This course can be used only to satisfy an elective choice).
2 Class Hours, 2 Laboratory Hours

RDG 104 Reading for International Students **3 Credits**
Practice of oral and silent reading in English for international students, with emphasis on vocabulary expansion and reading comprehension. Articles and other short selections to be read and discussed in class.
3 Class Hours

RDG 110 Rapid Reading **1 Credit**
Development of skills characteristic of the mature reader. Examination of structure of material, emphasis on identification of purpose, flexibility of rate. Use of controlled readers, reading accelerators.
2 Class Hours

The following courses are limited-credit activities for students wishing to enhance various study skills:

LRS 101 Learning Skills: Time Scheduling and Concentration **½ Credit**
General principles of academic success, relationship of outside work and study, scheduling and organizing time, study and concentration. Students will construct a working study schedule.
3 Class Hours, 3 Weeks

LRS 102 Memory and Exams **½ Credit**
Theories of memory. Methods of review, strategies for taking essay and objective examinations.
3 Class Hours, 3 Weeks

LRS 103 Learning Skills: Textbook Mastery **½ Credit**
Use of college textbooks as study aids, principles of effective text reading, text study systems. Extensive application of these principles in the student's own textbook.
3 Class Hours, 3 Weeks

LRS 104 Listening and Notetaking **½ Credit**
Examination of organizational patterns as they exist in oral communication. Exploration of systems on note-taking, and application of systems to student's own lectures and notes.
3 Class Hours, 3 Weeks

LRS 110 Learning Skills: The Research Paper **1 Credit**
Shaping the paper: development of a topic, location of appropriate resources and digestion of the material. Writing the paper: outlining, effective composition and proper form. A hands-on approach in which students actually research a topic and compose a term paper.
2 Class Hours for 8 Weeks

LRS 120 The Art of Thinking **1 Credit**
Logic as an art. Logical principles taught in imaginative ways to achieve understanding. Emphasis on the practice of reasoning. Fundamental logical rules are taught as tools to enable the students to gain experience and confidence in thinking about issues that are important to them.
2 Class Hours for 8 Weeks

RESPIRATORY COURSE

RES 120* Intensive Care Unit **3 Credits**
Recognition, medical management and prevention of acute respiratory diseases. Anatomy of the respiratory system including blood gas analysis, care of the airway and mechanical ventilation. Some previous medical terminology desired.
3 Class Hours

***TAUGHT EVENINGS ONLY**

SECRETARIAL SCIENCES

SEC 100 Typewriting **1 Credit**
Introduction to typewriting and machine parts. Develop speed, accuracy in typing exact copy for 3 minutes. For students who want a basic knowledge of the keyboard.
2 Class Hours, 2 Laboratory Hours, 5-Week Course

Note — SEC 101A, 101B and 101C Typewriting (below) were formerly combined in SEC 101 Typewriting, which is no longer offered.

SEC 101A Typewriting **1 Credits**
Introduction to the electric typewriter keyboard and machine operations. Development of basic skill building in typing exact copy by touch for 3 minutes with a maximum of 3 errors.
2 Class Hours, 3 Laboratory Hours, 5-Week Course
Prerequisite: For international students, ENG 104 English as a Second Language or permission of instructor

SEC 101B Typewriting **1 Credit**
Continuation of skill building with emphasis on pacing and rhythm drills. Development of speed and accuracy in typing exact copy by touch for 5 minutes with a maximum of 5 errors.
2 Class Hours, 3 Laboratory Hours, 5-Week Course
Prerequisite: SEC 101A Typewriting or equivalent

SEC 101C Typewriting **1 Credit**
Development of basic techniques in preparing typewritten letters, horizontal and vertical centering exercises, momorandums, tabulations, outlines, manuscripts.
2 Class Hours, 3 Laboratory Hours, 5-Week Course
Prerequisite: SEC 101B Typewriting or equivalent

Note — SEC 102A, 102B and 102C Typewriting (below) were formerly combined in SEC 102 Typewriting, which is no longer offered.

SEC 102A Typewriting **1 Credit**
Advanced skill building with emphasis on pacing and rhythm drills. Development of speed and accuracy in typing exact copy by touch for 5 minutes with a maximum of 5 errors.
2 Class Hours, 3 Laboratory Hours, 5-Week Course
Prerequisite: 5-minute timing at 41 net words per minute with 5-error maximum

SEC 102B Typewriting **1 Credit**
Development of advanced techniques in typing different styles of business letters, manuscripts, memorandums.
2 Class Hours, 3 Laboratory Hours, 5-Week Course
Prerequisite: SEC 102A Typewriting or equivalent

SEC 102C Typewriting **1 Credit**
Development of advanced techniques in typing different styles of tabulations, financial statements, business forms, employment application data.
2 Class Hours, 3 Laboratory Hours, 5-Week Course
Prerequisite: SEC 102B Typewriting or equivalent

*TAUGHT EVENINGS ONLY

SEC 105* Introductory Typewriting **2 Credits**
Touch typewriting. Presentation of keyboard, typing of centering problems, memorandums, postal cards, personal and business letters, outlines, manuscripts. Emphasis on speed and accuracy.
2 Class Hours, 2 Laboratory Hours

SEC 106* Intermediate Typewriting **2 Credits**
Continued speed and accuracy emphasis. Typing of business letters, manuscripts, memorandums, tables, various business forms, financial statements, data sheets, employment applications.
2 Class Hours, 2 Laboratory Hours
Prerequisite: SEC 105 Introductory Typewriting or equivalent

SEC 109 Basic Transcription **3 Credits**
Designed to improve understanding of basic sentence structure, grammar, business vocabulary and punctuation as related to the business world. Practical application through exercises at the typewriter on rough draft copy.
3 Class Hours

SEC 110 Shorthand **3 Credits**
Beginning course in Gregg Shorthand, Series 90 System. Basic principles to promote the ability to read fluently from plates and notes. Longhand and typewritten transcription from shorthand notes dictated from unfamiliar material at minimum rate of 60 words a minute.
2 Class Hours, 3 Laboratory Hours
Prerequisite: SEC 101A, B and C Typewriting or equivalent or concurrent enrollment in SEC 101 A, B and C Typewriting

SEC 111 Shorthand and Transcription **3 Credits**
Development of a minimum rate of 70 words per minute shorthand speed, dictated from unfamiliar material, with efficient transcription techniques to produce typewritten mailable transcripts. Emphasis on shorthand speed building while integrating the correct usage of principles of grammar, spelling, punctuation, capitalization, vocabulary, numbers, word division, words often confused.
2 Class Hours, 3 Laboratory Hours
Prerequisites: SEC 110 Shorthand or equivalent and SEC 101 A, B and C Typewriting or equivalent

SEC 130 Freshman Orientation **½ Credit**
Introduction to the College and departmental policies and procedures. Discussions pertaining to the Secretarial Sciences options and career paths. A review of the College's services available for students.
1 Class Hour Bi-weekly

SEC 151 Business Communications **3 Credits**
Development of desirable written communication style. Review of basic writing mechanics. Composition of letters of inquiry and reply, claim and adjustment, credit and collection, sales and promotion, application. Memorandums, news releases, short reports, telegrams.
3 Class Hours
Prerequisite: SEC 101 A, B and C Typewriting or equivalent

SEC 210 Executive Typewriting **3 Credits**
Training in advanced typing techniques and magnetic keyboard equipment. Emphasis on preparing documents for law, insurance, real estate, investment, education. Continuation of typewriting speed building.
2 Class Hours, 2 Laboratory Hours
Prerequisites: SEC 102 A, B and C Typewriting and SEC 240 Office Practice

SEC 212 Technical Typewriting 3 Credits

Training in understanding the correct procedures in preparing typewritten technical materials and magnetic keyboard equipment. Emphasis on typing equations, formulas, laboratory reports. Continuation of typewriting speed building.
2 Class Hours, 2 Laboratory Hours
Prerequisites: SEC 102 A, B and C Typewriting and SEC 240 Office Practice

SEC 232 Specialized Dictation: Executive 3 Credits

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of investment, law, insurance.
2 Class Hours, 3 Laboratory Hours
Prerequisites: SEC 111 Shorthand and Transcription and SEC 102 A, B and C Typewriting

SEC 234 Specialized Dictation: Engineering 3 Credits

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of aerospace, life sciences, synthetics, hydro-carbons-petrochemicals, electronics, communications, computer, nucleonics.
2 Class Hours, 3 Laboratory Hours
Prerequisites: SEC 111 Shorthand and Transcription and SEC 102 A, B, and C Typewriting

SEC 236 Machine Transcription 3 Credits

Emphasis on increasing skill in transcribing recorded materials. Continuing development of knowledge of business vocabulary, correct usage of principles of grammar, punctuation, spelling in the machine transcription of business documents.
2 Class Hours, 2 Laboratory Hours
Prerequisites: SEC 102 A, B and C Typewriting and SEC 151 Business Communications

SEC 240 Office Practice 2 Credits

Advanced typing material on selected topics using various typewriters. Practical experience in operation of calculating, duplicating, transcribing machines, and magnetic keyboard equipment. Training in telephone procedures on the college switchboard.
4 Laboratory Hours
Prerequisites: SEC 111 Shorthand and Transcription
and SEC 102 A, B and C Typewriting

SEC 242 Office Procedures 3 Credits

Final preparation for an office career. Business activities related to word-processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.
3 Class Hours
Prerequisite: For Office Services Assistant students — SEC 236 Machine Transcription
For Executive and Industrial Secretarial students — SEC 151 Business Communications and SEC 232 or 234 Specialized Dictation and SEC 240 Office Practice

SEC 246 Office Machines 3 Credits

Practical experience in the operation of various typewriters including magnetic keyboard equipment, calculators, mimeo and spirit duplicators, transcribing and dictating equipment.
2 Class Hours, 3 Laboratory Hours
Prerequisite: SEC 102 A, B and C Typewriting; concurrent enrollment for Office Certificate students only

SEC 248 General Office Procedures 3 Credits

Analysis of the basic tasks performed by the office employee. How to apply for and secure the office position. Filing systems and procedures, telephone and telegram services, postal information, office supplies and equipment.
3 Class Hours
Prerequisite: SEC 102 A, B and C Typewriting; concurrent enrollment for Office Certificate students only

SEC 260 Directed Secretarial Experience—Model Office 2 Credits

Secretarial students are required to work at least four hours weekly in the model office to gain practical working knowledge by producing various types of campus communications.
4 Laboratory Hours
Prerequisite: For Executive and Engineering Secretarial students—
SEC 102 A, B and C Typewriting and SEC 111 Shorthand and Transcription.
For Office Services Assistant students—SEC 102 A, B and C Typewriting and SEC 151 Business Communications

SEC 261 Extended Secretarial Experience—Model Office 2 Credits

Continuation of SEC 260 Directed Secretarial Experience—Model Office, with emphasis on advanced word processing training and professional development. Students are required to assume more demanding and sophisticated responsibilities than in SEC 260.
4 Laboratory Hours
Prerequisites: SEC 260 Directed Secretarial Experience—Model Office and approval of the Model Office coordinator and department chairperson

SEC 299 Independent Study 1-4 Credits

Advanced investigation or research in an individual student's major field of study. Under the guidance of a faculty member, the independent study concerns material beyond the scope and depth of the ordinary course offering. Only one independent study course is allowed per semester.
Prerequisite: Approval of faculty member and department chairperson

SIGN LANGUAGE

HUS 120* Sign Language 3 Credits

Introduction to total communication as a means of conversing with the deaf. Amesian (American Sign Language), fingerspelling, numbers, idioms, nonverbal communication, singing songs, poems, stories, psychology of the deaf.
3 Class Hours

HUS 220* Intermediate Sign English 3 Credits

Intermediate Sign English (Ameslish) is straight English syntax using Ameslan based on conceptual signs in English syntax.
3 Class Hours
Prerequisite: HUS 120 Sign Language or permission of instructor

*TAUGHT EVENINGS ONLY

SOCIAL SCIENCE (INTERDISCIPLINARY)

SOS 100 Urban Society **3 Credits**
Conditions, trends and problems of contemporary urban American society. Efforts and proposals for making the cities, suburbs and exurbs better places to live and work in during a time of increasing population and increasing population concentration. A look at such urban systems as education, housing, transportation, criminal justice, business. Consideration of the "Rural Renaissance." Brief focusing upon the current roles of religion, the media, recreation.
3 Class Hours

SOS 120 Science and Civilization **3 Credits**
A survey of the interplay between science/technology and Western Civilization from earliest times to the present (major emphasis on the industrial and post-industrial periods). Role of culture in determining scientific/technological advances, interplay between war and scientific/technological advances, necessary conditions for an industrial revolution (scientific/technological), impact of science/technology on a post-industrial society.
3 Class Hours

SOS 130 Man, Technology and Environment **3 Credits**
Biological, economic and political dimensions of the environmental crisis. The conditions created by population growth, a rising standard of living, the increased demand on natural resources, and the advance of technology. Alternative strategies to deal with pollution and energy problems.
3 Class Hours

SOS 145 Psychology of Sex Roles **3 Credits**
Biological, social and psychological determinants of maleness and femaleness. Physical, economic, political, Biblical and psychological causes of sexism (male superiority). Relationship to cultural evolution.
3 Class Hours

SOS 146 Aging: An Overview **3 Credits**
Multidisciplinary analysis of the bio-psycho-social characteristics of older persons. Examination of major issues and dynamics involved in the process of growing old.
3 Class Hours
Prerequisite: PSY 110 General Psychology or permission of instructor.

SOS 150 Introduction to Human Service Work **6 Credits***
Treatment modalities, goal planning, facility usage, counseling, helping skills, principles of human development, etiology, normalization, detection. Institutionalization effects, empathy training, evaluation, problem solving, transactional skills, theoretical systems, ethical issues. Psychoactive drugs, habilitative and rehabilitative programs, community services.

*Credit avaliable only to those who complete successfully a certified institution - based training program and credit is only applicable toward the Associate in Science degree in the Liberal Arts Division's Mental Health and Retardation Emphasis. Credit cannot be used to fulfill other social science requirements.

SOS 160-169 Case Studies in Ethnicity **1 Credit**
A sociological analysis of the origins and experiences, the cultural patterns and social relationships of Americans from various ethnic backgrounds.

SOS 160 The Italian American **1 Credit**
Deals with Italian Americans as an initial attempt to focus attention on ethnic groups and their persistent impact.
1 Class Hour

SOS 221 U.S. Foreign Policy Since World War II **4 Credits**
Domestic roots of policy making, critical analysis of principles and conduct of policy making, issues and arenas of U.S. involvement. For students in the Liberal Arts Division's Honors Program, and others with permission.
4 Class Hours

SOS 288 Seminar in Community Social Service Organizations **3 Credits**
Study of federal, state and local agencies, their functions, limitations and interrelationships. Emphasis on determining the structure and purpose of an agency as related to delivery of human services. A beginning, working knowledge of how to integrate human service skills into over-all activities in the field will be provided. Weekly field work in a selected agency required.
2 Class Hours, 2 Laboratory Hours
Prerequisites: 6 Credits in psychology or sociology, 3 of which may be taken concurrently.

SOS 290 Social Science Field Experience **3 Credits**
Introduction to the practical issues of the "helping relationship" and an understanding of agency operations. Each student to spend a minimum of 90 hours working in community social and educational agencies. Weekly seminars, outside reading and written reports are required. During the seminars specific helping techniques such as facilitating, goal-setting, reinforcing and supporting will be analyzed.
1 Class Hour
Prerequisite: 3 Credit hours in psychology or sociology plus completion of or concurrent enrollment in 3 additional credit hours in either of these areas.

SOCIOLOGY

SOC 110 Introduction to Sociology **3 Credits**
Sociological facts and principles dealing with the scientific study of human relationships. Emphasis on analysis and study of culture and human society, socialization, groups and group structures. Stratification, collective behavioral patterns and the concept of social institutions. Initial experiences for students who desire an introduction to the sociological perspective.
3 Class Hours

SOC 111 Social Problems **3 Credits**
The sociology of social and urban problems. Topics may include crime, population, inequality, discrimination, mental illness, attitudes toward work, social control and the dynamics of social change. Students should be aware that individual instructors approach these problems in different ways, depending on students' needs and instructors' interests. SOC 110 Introduction to Sociology is recommended as an initial experience.
3 Class Hours

SOC 120 Ethnic Groups **3 Credits**
Survey of the structure and interrelationships of selective ethnic minority groups. The approach is socio-historical, with an attempt to integrate the major theories and techniques of sociological analysis as applied to issues of ethnic concern.
3 Class Hours

SOC 210 Crime and Deviant Behavior **3 Credits**
The theoretical aspects of deviance as crime, variations in crime rates, the social and psychological causes of crime, other deviant behavior and the salient research discoveries in these areas. Specific areas within criminology such as homicide and suicide from a multidisciplinary approach to permit as broad an understanding of the problem as possible.
3 Class Hours
Prerequisite: SOC 110 Introduction to Sociology

SOC 230 Marriage, Family and Divorce **3 Credits**
Social and personal factors which make for adequate family functioning, the forms the family takes, its internal processes and the functions it serves in society. Covers systematically the important theoretical and experimental ground on those issues relevant to both the scholarly and practice-minded student.
3 Class Hours
Prerequisite: SOC 110 Introduction to Sociology

SOC 299 Independent Study **1-3 Credits**
An individual student project in sociology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: 3 semester hours in sociology

SPANISH

SPA 101, 102 Beginning Spanish **4, 4 Credits**
Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.
4 Class Hours, 1 Laboratory Hour each
Prerequisite: SPA 101 Beginning Spanish for SPA 102

SPA 201 Intermediate Spanish I **3 Credits**
Intensive review and continuation of grammar and syntax. Intensive and extensive reading of literary works of recognized authors. Aural comprehension and oral practice in the classroom and audio-lingual laboratory.
3 Class Hours, 1 Laboratory Hour
Prerequisite: SPA 102 Beginning Spanish

SPA 202 Intermediate Spanish II **3 Credits**
Intensive and extensive reading of literary works of recognized authors. Classroom discussion and conversation based on these texts, in the language.
3 Class Hours, 1 Laboratory Hour
Prerequisite: SPA 201 Intermediate Spanish I

SPA 203, 204 The Spanish Language Through Its Literature **3, 3 Credits**
Practice in and emphasis on conversation and composition in Spanish, based on the reading of various literary masterpieces from centuries past to the present. (Not offered in 1981-82 academic year).
3 Class Hours each
Prerequisites: SPA 202 Intermediate Spanish II for SPA 203
SPA 203 The Spanish Language Through Its Literature for SPA 204

SPA 205 Spanish Conversation and Composition I **3 Credits**
The art of conversation and writing in Spanish practiced from basic proficiency to that of a more advanced level. Topics of conversation of common, daily interest subjects. Writing of short paragraphs and letters. (Not offered in 1981-82 academic year).
3 Class Hours
Prerequisite: SPA 202 Intermediate Spanish II or equivalent

SPA 299 Independent Study: Spanish **1-3 Credits**
An individual student project concerned with advanced work in a specific area of Spanish. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in Spanish

SPEECH

SPK 100 Basic Speaking **2 Credits**
Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types. Not for Liberal Arts students.
2 Class Hours

SPK 102 Effective Speaking **3 Credits**
Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types.
3 Class Hours

SPK 104 Basic Speaking for International Students **3 Credits**
Designed to provide international students with practice, articulation and vocabulary needed to increase self-confidence in English conversation, discussion in the classroom and other daily situations.
3 Class Hours

SPK 105 Intermediate Speaking for International Students **3 Credits**
Designed for international students emphasizing free and controlled conversation and discussion. Continued practice in articulation, phrasing and vocabulary building.
3 Class Hours
Prerequisite: SPK 104 Basic Speaking for International Students or equivalent

SPK 299 Independent Study: Speech **1-3 Credits**
An individual student project concerned with advanced work in a specific area of speech. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in speech

THEATER

THR 101 Theater Appreciation **3 Credits**
Art of the theater to increase understanding and appreciation of drama. A cultural approach considering the interrelationship of all aspects of production including plays, acting, directing, costume, make-up and lighting. Attendance at local productions. (Students taking this course may also be interested in LIT 230 American Drama, LIT 233 World Drama.)
3 Class Hours

THR 109, 110 Practicum in Theater Design and Technology **3, 3 Credits**
Stage design (both lighting and scenic) and construction techniques are studied first hand, as students participate in actual production of two plays each semester. Problems encountered during a production are analyzed. Individualized instruction is increased as students begin to focus on their particular areas of interest.
3 Class Hours each

THR 111 Beginning Acting **3 Credits**
Fundamental acting techniques. Development of individual skills and disciplines relative to external acting techniques. Use of face, voice and movement.
3 Class Hours

THR 112 Acting **3 Credits**
Intensive application of acting techniques through scene study and performance. Problems of character analysis, internal acting and style.
3 Class Hours

THR 117 Creative Dramatics **3 Credits**
Fundamentals of creative dramatics, its use in teaching, recreation and rehabilitation. Introduction to techniques used and practical application opportunities.
3 Class Hours

THR 190 Broome Community College Theater **1 Credit**
Students who participate in the plays and performances of the BCC Theater Co. receive one credit per semester. See page 28.

THR 201, 202 Children's Theater **3, 3 Credits**
Touring children's theater company during academic year. Performances at area elementary schools for classtime and assembly period programs. Visiting with students pre/post production. Design and construction of costumes, sets and properties. Analysis of children-oriented plays, development of scripts, rehearsal and performance.
3 Class Hours each

THR 203 Summer Touring Children's Theater Company **3 Credits**
Touring children's theater company during summer. Performances at area recreation centers, parks, camps and playgrounds. Visiting with children pre/post production. Design and construction of costumes, sets, and properties. Analysis of children-oriented plays, development of scripts, rehearsal and performance.
3 Class Hours

THR 218 Role Study and Characterization **3 Credits**
The varied creative processes by which an actor might develop a characterization are studied in theory and explored in practice with emphasis upon scenework.
3 Class Hours

THR 219 Periods and Styles of Acting **3 Credits**
Procedures and techniques necessary for acting in theatrical period productions such as Elizabethan, Italian Renaissance, Restoration, Absurdist, and innovative styles.
3 Class Hours
Prerequisites: THR 218 or permission of instructor

THR 221 History of the Theater **3 Credits**
History of stage production with emphasis on theater as a performing art. Chronological examination of theater activity as a mirror of social and cultural experience from primitive times through the Renaissance.
3 Class Hours

THR 222 History of the Theater **3 Credits**
History of stage production from the 18th Century to the present, with attention to the contribution of literature and the fine arts to stage development.
3 Class Hours

THR 231 Stage Directing I **3 Credits**
Examination of the perspective of the director in relation to himself, the play, the actors, designers, playwright, and the collaborative evolution of the production. Development of directing methods and techniques in terms of casting, pictorial emphasis and harmony, rehearsal and production procedures. Preparation of prompt book and direction of scenes. Proscenium and non-proscenium techniques.
3 Class Hours

THR 232 Stage Directing II **3 Credits**
Detailed analysis of directing in relation to theatrical styles and periods. Examination of the techniques of such directors as Meyerhold, Antoine, Guthrie and Kazan. Direction of pertinent scenes.
3 Class Hours

THR 299 Independent Study: Theater **1-3 Credits**
An individual student project concerned with advanced work in a specific area of theater. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in theater

TOOL AND DIE MAKING

Practically all Tool and Die Making courses are taught in the evening only.

TDA 120 Precision Measurement and Inspection 3 Credits

Measuring tools and instruments, simple though complex. Micrometers, verniers, gage blocks, height gages, sine bar, super micrometer, comparators, surface finish comparison, test indicators, toolmakers microscope and optical flats.
3 Class Hours
Prerequisites: MET 113 Engineering Drawing I, MAT 107 Basic Technical Mathematics II and MET 121 Manufacturing Processes I

TDA 130 Tool Grinding 2 Credits

Wheel selection and shapes, oil-stones, honing cutting tools, grinding, single-point tools, angle calculations, universal grinder, drilling grinding, testing drill points. Grinding milling cutters, clearance grinding, tooth rest, grinding side, shank, angular inserted-blade, and helical cutters. Gear cutters, hobs, reamers, taps, radial and tangential chasers. Grinding carbide tools, grinding internal, slab broaches.
1 Class Hour, 2 Laboratory Hours
Prerequisites: MAT 107 Basic Technical Mathematics II

TDA 132 Statics 2 Credits

Vectors, their composition and resolution, colinear, coplaner, concurrent and non-concurrent force systems, friction, free body diagrams, tension, shear, compression, first moments, centers of gravity, moments of inertia and truss analysis.
2 Class Hours
Prerequisite: MAT 107 Basic Technical Mathematics II

TDA 140 Production Processes 3 Credits

Theory and application of multi-operation tooling. Automatic tool changes; numeric and other positioning systems to turning, milling, drilling, broaching, grinding, honing. Production inspection techniques including airgauging, coordinate measuring machines.
3 Class Hours

TDA 200 Metallurgy 2 Credits

Ferrous and non-ferrous alloys including annealing, normalizing, quench hardening, tempering, age hardening, austempering. Hardness testing, microscopic examination of metallic structures, phase modification, phase diagrams. Laboratory exercises to support theory.
1 Class Hour, 2 Laboratory Hours
Prerequisite: MET 121 Manufacturing Processes I

TDA 230 Tool Design 4 Credits

Introduction to the problems of tool design with emphasis on planning the processes of production, designing and developing the necessary tools, and utilizing available manufacturing facilities. Practical analysis and comparison of the use and cost of tools, jigs and fixtures, dies, molds and gauges as they are used in modern manufacturing.
4 Class Hours
Prerequisites: MET 122 Manufacturing Processes II, MAT 107 Basic Technical Mathematics II

TDA 248 Hydraulics and Pneumatics 3 Credits

Basic theory of hydraulic and pneumatic systems. Combinations of systems in various circuits, basic designs and functions of circuits and motors, controls, electro-hydraulic servo-mechanisms, plumbing, filtration, accumulation and reservoirs.
2 Class Hours, 2 Laboratory Hours

TDA 250 Control Systems 3 Credits

Hydraulic, pneumatic, mechanical, electrical and electronic control systems and components. Basic description, analysis and explanation of operation. Typical performance characteristics, limitations on performance accuracy, applications and their utilization in industrial processes.
3 Class Hours
Prerequisites: MET 122 Manufacturing Processes II and TDA 248 Hydraulics and Pneumatics

TDA 261 Introduction to Quality Control and Inspection 3 Credits

Introduction to inspection devices and practices. Basic statistical techniques as they relate to the use of control chart sampling plans and related quality control procedures.
3 Class Hours
Prerequisites: MAT 107 Basic Technical Mathematics II

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FIRE PROTECTION TECHNOLOGY

See this heading under Adjunct Faculty

HEALTH SERVICES

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EMERITUS
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Emeritus
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M.A., SUNY at Binghamton
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PHYSICAL EDUCATION

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M.S., Ithaca College
RICHARD E. BALDWIN, Prof.
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EDWIN C. DAUB, Assoc. Prof.
B.S., M.S., SUNY at Cortland
NANCY ROSSITER, Instr.
B.S., SUNY College at Cortland
DUANE WHITTAKER, Asst. Prof.
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PHYSICAL PLANT

RALPH WALTER
Assistant to Vice President

PHYSICS

See Engineering Science and Physics

PLACEMENT

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MARTHA KUHARIK
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B.S., SUNY College at Buffalo

PLANNING AND DEVELOPMENT

Director Appointment Pending

PUBLIC RELATIONS

See Community Relations

RADIOLOGIC TECHNOLOGY

NANCY BUTTON, Chairperson
R.T. Nesbitt Memorial Hospital
School of Radiologic Technology
B.A., Wilkes College
M.S., Marywood College

JANE DeMARIA, Instr.
A.A.S., Broome Community College
B.S., Medical College of Georgia
BARBARA VALENTINO, Instr.
A.A.S., Broome Community College
B.P.S., SUNY Empire State College

REGISTRAR

Appointment Pending

SECRETARIAL SCIENCES

CHESTER J. BUGLIA
B.S., Pennsylvania State University
M.Ed., Bloomsburg State College
ELIZABETH R. ALTENHOFEN, Asst. Prof.
B.S., Hartwick College
MARIE DAVENPORT, Assoc. Prof.
A.A.S., Broome Community College
B.S., M.S., SUNY at Albany
CORINNE CRANDELL, Asst. Prof.
A.A.S., Mohawk Valley Community College
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M.S., SUNY College at Oneonta

DONNA E. MILLER, Tech. Asst.
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EVELYN A. KATUSAK, Prof.
B.S., M.S., SUNY at Albany
ESTHER SABOL
Coordinator of Word Processing Center/Model Office
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DORATHY SAEGER, Assoc. Prof.
B.A., Valparaiso University
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SOCIAL SCIENCES

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A.B., Smith College
M.S., SUNY College at Cortland
M.S., University of Scranton
FRANCIS P. CASELLA, Prof.
A.B., M.A., SUNY at Albany
ROBERT COTTEN, Asst. Prof.
A.B., Princeton University
J.D., Harvard University
CHARLES CROLL, Prof.
B.A., SUNY at Binghamton
M.S., SUNY College at Oneonta
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M.A., M.S., SUNY at Albany
RICHARD M. ROMANO
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STUDENT ACTIVITIES

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Registered Architect
LAWRENCE LEPAK
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GEORGE MYSNYK
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B.S., Indiana University of Pennsylvania

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M.S.T., SUNY at Binghamton

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B.A., Moravian College
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B.S., SUNY at Binghamton

STATE UNIVERSITY OF NEW YORK

CLIFTON R. WHARTON, JR., Chancellor

Broome Community College is one of the 64 colleges that comprise the State University of New York (SUNY), which was established by the State Legislature in 1948. The 64 units include 30 locally-sponsored two-year community colleges like Broome.

The University's 64 geographically dispersed campuses bring educational opportunities within commuting distance of virtually all New York citizens. In academic 1980-81 more than 370,000 students enrolled in its classrooms or pursued study at home, at their own pace, through such innovative institutions as Empire State College, a campus without walls. Of the 370,000, about 30 percent are 24 years of age or older.

The University is uniquely organized into a system comprised of:

Four University centers, two medical centers, 12 colleges of arts and sciences, a non-residential college, four specialized colleges, five statutory colleges, six agricultural and technical colleges, and 30 locally-sponsored community colleges.

In addition to baccalaureate studies, 12 of the senior campuses offer graduate study at the doctoral level, and 22 at the master's level.

The two-year colleges offer associate degree opportunities in a wide range of technical areas. They also provide transfer programs for students wishing to continue to the baccalaureate degree. In the 1980-81 college year, the community colleges enrolled more than 175,000 students. This number is about equally divided into full-time and part-time categories. Ten Educational Opportunity Centers serve the educationally deprived by upgrading occupational skills for more gainful employment and identifying students with college potential to prepare them for enrollment in the state's public and private colleges.

State University is governed by a Board of Trustees, appointed by the Governor, which determines the policies to be followed by the 34 State-supported campuses. The 30 community colleges operating under the program of State University have their own local boards of trustees. SUNY's motto is "To Learn-To Search-To Serve," which emphasizes The University's three-fold mission of education, research and public service.

During its brief history, State University has graduated more than 700,000 alumni, the majority of whom are pursuing their careers in communities across the state.

UNIVERSITY CENTERS

State University at Albany
State University at Binghamton
State University at Buffalo
State University at Stony Brook

COLLEGES OF ARTS AND SCIENCE

College at Brockport
College at Buffalo
College at Cortland
Empire State College
College at Fredonia
College at Geneseo
College at New Paltz
College at Old Westbury
College at Oneonta
College at Oswego
College at Plattsburgh
College at Potsdam
College at Purchase

COLLEGES AND CENTERS FOR THE HEALTH SCIENCES

Health Sciences Center at Buffalo University Center
Health Sciences Center at Stony Brook University Center
Downstate Medical Center at Brooklyn
Upstate Medical Center at Syracuse
College of Optometry at New York City

AGRICULTURAL AND TECHNICAL COLLEGES

College at Alfred
College at Canton
College at Cobleskill
College at Delhi
College at Farmingdale
College at Morrisville

COMMUNITY COLLEGES

(Locally-sponsored, two-year colleges under the program of State University)

Adirondack Community College at Glens Falls
Broome Community College at Binghamton
Cayuga County Community College at Auburn
Clinton Community College at Plattsburgh
Columbia-Greene Community College at Hudson
Community College of the Finger Lakes at Canandaigua
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Erie Community College at Williamsville, Buffalo, Orchard Park
†Fashion Institute of Technology at New York City
Fulton-Montgomery Community College at Johnstown
Genesee Community College at Batavia
Herkimer County Community College at Herkimer
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson Community College at Watertown
Mohawk Valley Community College at Utica
Monroe Community College at Rochester
Nassau Community College at Garden City
Niagara County Community College at Sanborn
North Country Community College at Saranac Lake
Onondaga Community College at Syracuse
Orange County Community College at Middletown
Rockland Community College at Suffern
Schenectady County Community College at Schenectady
Suffolk County Community College at Selden, Riverhead, Brentwood
Sullivan County Community College at Loch Sheldrake
Tompkins Cortland Community College at Dryden
Ulster County Community College at Stone Ridge
Westchester Community College at Valhalla

SPECIALIZED COLLEGES

College of Environmental Science and Forestry at Syracuse
Maritime College at Fort Schuyler
College of Technology at Utica/Rome
†Fashion Institute of Technology

*STATUTORY COLLEGES

College of Agriculture and Life Sciences at Cornell University
College of Ceramics at Alfred University
College of Human Ecology at Cornell University
School of Industrial and Labor Relations at Cornell University
College of Veterinary Medicine at Cornell University

*These operate as "contract colleges" on the campuses of private universities.

†While offering a limited number of baccalaureate degree programs, in addition to the associate degree, FIT is financed and administered in the manner provided for community colleges.

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X-Ray Technology (See Radiologic Technology)

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1. TITCHENER HALL

Engineering Science and Physics
Liberal Arts
Mathematics

2. WALES BUILDING

Admissions Office
Administrative Offices
Office of Continuing Education
Counseling and Student Development Center
Finance Office
Financial Aid
Health Service
Registrar's Office
Public Relations Office
Student Affairs Office

3. SCIENCE BUILDING

Chemical Technology
Dental Hygiene

4. ELECTRICAL BUILDING

Electrical Technology

5. STUDENT CENTER

Book Store
Cafeteria
Gymnasium
Little Theater
Physical Education

6. MAINTENANCE BUILDING

7. THE UNION

Housing
Student Activities
Student Lounge

8. MECHANICAL BUILDING

Civil Technology
Mechanical Technology
Special Career Programs

9. CECIL C. TYRRELL LEARNING RESOURCES CENTER

Alumni Association
Audio-Visual
Developmental Centers
  Mathematics
  Reading and Study Skills
  Writing
Educational Opportunity Program
Educational Technology
BCC Foundation
Library
Science Learning Center

10. BUSINESS BUILDING

Accounting and Business Administration
Computer Center
Marketing
Medical Assistant
Medical Record Technology
Radiologic Technology
Secretarial Sciences

11. FACULTY OFFICES

12. 901 FRONT STREET

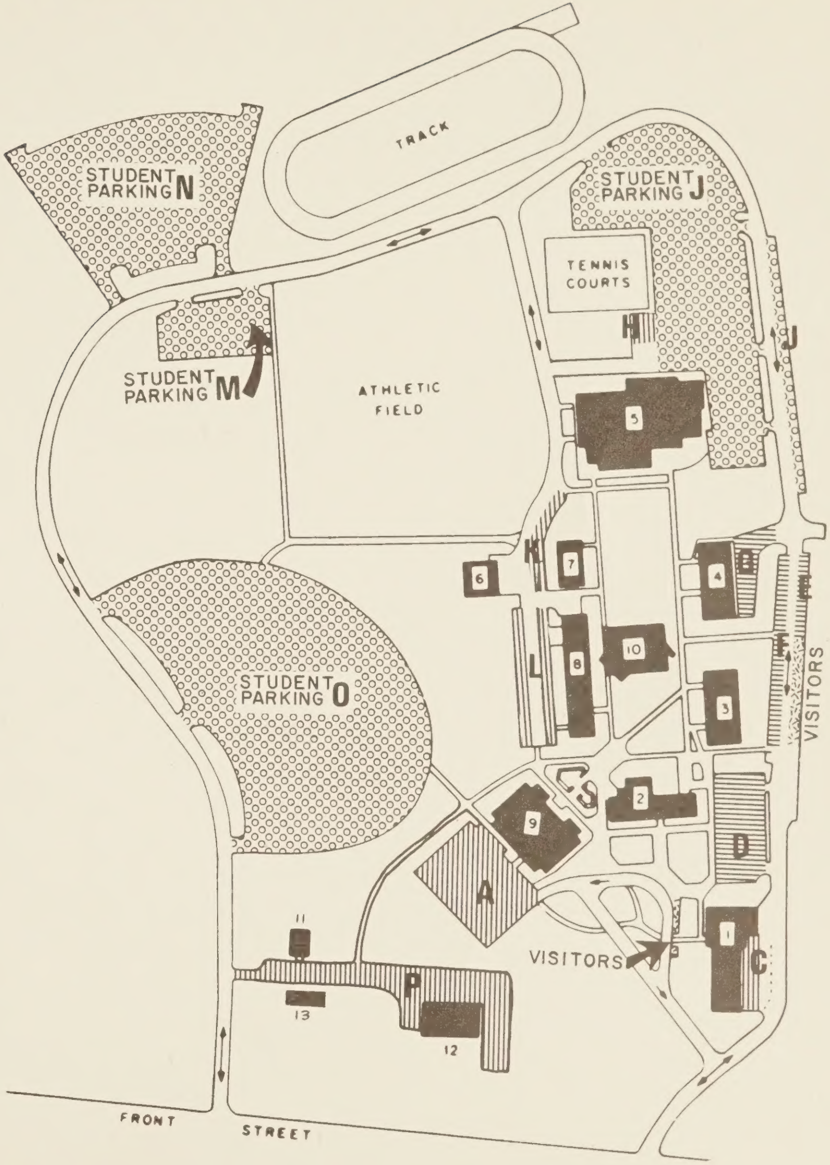
Biological Sciences
Medical Laboratory Technology
Nursing

13. "ALMS HOUSE" BUILDING

░ STUDENT PARKING

▥ FACULTY/STAFF PARKING

▒ VISITORS PARKING



COMMUNITY
COLLEGE
1946
BROOME